كلية الشرق الأوسط
Middle East College

IN SEMESTER (INDIVIDUAL) ASSIGNMENT

Module Code: COMP 10017 **Module Name: Principles of Programming**

Level: 1 **Max. Marks: 100**

Instructions to Student

- **Answer *all* questions.**
- **Deadline of submission: 19/04/2021 23:59**
- **The marks received on the assignment will be scaled down to the actual weightage of the assignment which is 50 marks**
- **Formative feedback on the complete assignment draft will be provided if the draft is submitted at least 10 days before the final submission date.**
- **Feedback after final evaluation will be provided by 03/05/2021**

Module Learning Outcomes

The following LOs are achieved by the student by completing the assignment successfully

1) Describe the fundamentals of programming and the use of representing programming logic/numbers
2) Use different data types and operators in a programming language
3) Use different program control statements in a programming language

Assignment Objective

The aim of this assignment is to the test student's ability to use data types, various decision making and Iterative constructs to solve specific problems using Java programming language.

Assignment Tasks

1) Task 1 : Work proposal **(10 marks)**

Submit a work proposal for this assignment on or before 25/03/2021 (23:59) which must include:

1. Understanding of deliverables – initial understanding of solution to task2, task3, task4, task 5 and task6.
    a. For task 3, the student is requested to form 4 different expressions. Each expression must have the following criteria:
        i. Using 4 different algebraic operators, one modulus operator and five operands that you initialize with different values.

ii. Using 5 different relational operators and five operands that you initialize with different values.
iii. Using 5 Boolean operators of three types and five operands that you initialize with different values.
iv. Using 5 different algebraic and relational operators and five operands that you initialize with different values.

Use parentheses as per your choice.

b. For task 4, if you will choose option a) or option b), select an example of problem that you will analyze later in the report and which includes a checking process.

Examples of problems:

i. Purchasing a product online and checking the validity of the credit card
ii. Registering the modules for a student and checking if the session selected is not full
iii. Making an appointment with a doctor and checking if the time selected is available
iv. Making an online order for food and checking if there is any offer on the selected items to apply.

2. General overview of proposed plan -Timeline for completion of the given tasks.
3. List of resources. Please note that the resource that will be used for Task 3.a must not be changed in the final assignment submission.

The work proposal must be submitted in a word file through the link available in Moodle.

Task 2: Understanding from pre-class activities **(10 marks)**

Demonstrate your understanding on the topics given below by going through pre-class asynchronous materials provided to you on MEC Learn (week 2 – week 5) and completing the quizzes given at MEC Learn as per the due dates.

a. Fundamentals of programming
b. Flow charts
c. Operators
d. Conditional statements

Task 3: Operators **(20 marks)**

In this task, you need to **evaluate the four expressions** that were considered in the proposal and demonstrate at least **4 steps** of evaluating them.

Task 4: SDLC **(20 marks)**

ABC is a company specialized in Software Development. To build software applications with high quality, Program Development Life Cycle process is followed. It contains 5 phases: Analyzing, Designing, Coding, Testing and Maintaining.

The student must select one of the following questions:

a. **Explain** how the **Analysis phase** will be applied for the considered scenario in the proposal. You need to determine the list of classes that will be implemented and, for the main program, the list of inputs, outputs and the process.
b. **Apply the design** phase using the flow chart on the considered scenario from the proposal. You need to have input, output, at least 2 calculations and one conditional statement.
c. **Apply the Coding** phase on the following problem:

To find the total marks of a student in an assignment, we need to get the proposal marks, Task 2, Task 3 and Task 4 marks. The total mark, T, must be calculated as the total of all these marks. The final mark F, is then calculated as T minus the penalty, P, applied for late submission. P is calculated as 5% multiplied by the number of working days after the deadline N multiplied by T.

Note: we assume that N is less or equal to 5.
Write the Java program that reads the required input from the keyboard and displays the result as the student name, student id and final marks.

```
Assignment Marking
Enter the student name
Alaa
Enter the student ID
20S12345
Enter the marks of the proposal
9
Enter the marks of task1
20
Enter the marks of task2
20
Enter the marks of task3
20
Enter the marks of task4
20
Enter the number working days after the deadline. It must be <=5
1
The student name:Alaa, ID:20S12345
84.55
Press any key to continue...
```

Task 5: Using conditions **(20 marks)**

An instructor wants to give feedback to students in an assignment according to the number of correctly solved programs.

Example of feedback :

Nb of correct programs	Feedback
0	incomplete assignment
1	partially correct assignment
2	Satisfactory attempt
3	Good attempt
4	Excellent attempt

The following figure shows an example of execution.

```
Feedback to Students
Enter the number of correctly solved programs
4
The feedback is Excellent.
Press any key to continue...
```

Write the Java program that reads the number of correctly solved programs and displays the adequate feedback.

Note: Choose your own feedback message and do not copy from the previous table. Use any of the conditional statements like if-else/ if-else-if/switch case.

Task 6: Using Conditions **(20 marks)**

1. Refer to MEC Student Academic Integrity policy and write the program that will display the right penalty according to the student history, type of assessment and type of offence.

You can find more details on MEC Student Academic Integrity policy in section 1 of this document. It will be sufficient for the student to handle the sections from 1.1 to 1.4.

The following figure shows an example of execution.

```
Student Academic Integrity policy
Enter the number of previous AIV
0
Enter the type of offence
ghostwriting
Enter the type of assessment
assignment
The student will fail the module
Press any key to continue...
```

Another example:

```
Student Academic Integrity policy
Enter the number of previous AIV
0
Enter the type of offence
plagiarism
Enter the type of assessment
CW
ask the student to resubmit within 5 working days from the date he/she was informed.
Is the resubmission free of plagiarism?answer with True or False.
True
25% deduction will be applied on the total marks for the resubmission.
Press any key to continue...
```

Rules & Regulations:

- All resources should be cited using CU Harvard style.
- The final assignment must have a Title page, Table of Contents, References/ bibliography using CU Harvard Style and page numbers.
- Title Page must have Assignment Name, Module name, Session, your name, ID, and the name of the faculty.
- Softcopy in word format is to be submitted through Turnitin link on Moodle.
- Viva will be conducted after the assignment submission as per the dates informed earlier.

Guidelines:

- Assignment must be computer typed.
  - Font - Times New Roman
  - Font – Style - Regular
  - Font - Size - 12
  - Heading should be with Font Size 14, Bold, Capital and Underline.

- Explain with suitable diagrams wherever required. Diagrams must be drawn using suitable software or by pencil.
- Each student has to do the assignment individually / Students have to do the assignment collaboratively and each student should write a brief reflection on their contribution and learnings from group work.

- You can refer books in E-Library or use internet resource. But you should not cut and paste material from internet nor provide photocopied material from books. The assignment answers should be in your own words after understanding the matter from the above resources.

Assessment Evaluation Criteria

Classification And % Range		Knowledge and Understanding / Application of Theory / Evidence of Reading	Technical / Practical Skills	Reflection and critical analysis	General / Transferable skills*
First Class	Outstanding 94 -100	• Outstanding knowledge and depth of understanding of principles and concepts. • Outstanding ability to apply the theoretical concepts by considering of information systematically. • Evidence of reading a wide range of educational literature/research and where applicable workplace strategies, policies and procedures.	• Tasks completed with very high accuracy. • Outstanding skills in interpretation of results / and accomplishing practical tasks. • Demonstrates high degree of autonomy in completing tasks	• Outstanding skills for critical analysis, evaluation and synthesizing. • Outstanding reflective practices, demonstrating outstanding personal learning and growth, insight into required professional values and principles and professional development planning. • Original Findings presented with conviction and justified very well	• Outstanding ability to use learning resources • Outstanding presentation, logically structured, using accurate grammar and spelling. • Mostly correct cross-referencing and links to supporting evidence • Outstanding ability to communicate the information verbally and in writing. • Outstanding ability to work in groups and to manage teams. • Outstanding ability to learn autonomously. • Very accurate referencing and bibliography using appropriate referencing style • Outstanding problem solving skills and outstanding decision-making skills.
	Excellent 84 – 93.99	• Excellent knowledge and depth of understanding of principles and concepts. • Excellent ability to apply the theoretical concepts by considering of	• Tasks completed with high accuracy. • Excellent skills in interpretation of results / and accomplishing practical tasks.	• Excellent skills for critical analysis, evaluation and synthesizing. • Excellent reflective practices, demonstrating excellent personal learning and growth,	• Excellent ability to use learning resources • Excellent presentation, logically structured, using accurate grammar and spelling.

		information systematically. • Evidence of beyond the minimum expected range of of educational literature/research and where applicable workplace strategies, policies and procedures.		insight into required professional values and principles and professional development planning. • Findings presented with conviction and justified well	• Mostly correct cross-referencing and links to supporting evidence • Excellent ability to communicate the information verbally and in writing. • Excellent ability to work in groups and to manage teams. • Excellent ability to learn autonomously. • Accurate referencing and bibliography using appropriate referencing style • Excellent problem solving skills for decision-making skills.
Second Class, Upper Division	Very Good 77 – 83.99	• Very good knowledge and depth of understanding of principles and concepts. • Very good ability to apply the theoretical concepts by considering of information systematically. • Evidence of reading a very good number of educational literature/research and where applicable workplace strategies, policies and procedures.	• Tasks completed with very good accuracy. • Very good skills in interpretation of results / and accomplishing practical tasks.	• Very good skills for critical analysis, evaluation and synthesizing. • Very good reflective practices, demonstrating very Good personal learning and growth, insight into required professional values and principles and professional development planning. • Findings presented with conviction with very good justification	• Very good ability to use learning resources • Very good presentation, logically structured, using accurate grammar and spelling. • Mostly correct cross-referencing and links to supporting evidence • Very good ability to communicate the information verbally and in writing. • Very good ability to work in groups and to manage teams. • Very good ability to learn autonomously. • Precise referencing and bibliography using appropriate referencing style • Very good problem solving skills decision-making skills.

Second Class, Lower Division	Good 70 – 76.99	• Good knowledge and depth of understanding of principles and concepts. • Good ability to apply the theoretical concepts by considering of information systematically. • Evidence of reading a good number of educational literature/research and where applicable workplace strategies, policies and procedures.	• Tasks completed with good accuracy. • Good skills in interpretation of results / and accomplishing practical tasks.	• Good skills for critical analysis, evaluation and synthesizing. • Good reflective practices, demonstrating good personal learning and growth, insight into required professional values and principles and professional development planning. • Findings presented with conviction and good justification.	• Good ability to use learning resources • Good presentation, logically structured, using accurate grammar and spelling. • correct cross-referencing and links to supporting evidence • Good ability to communicate the information verbally and in writing. • Good ability to work in groups and to manage teams. • Good ability to learn autonomously. • Good referencing and bibliography using appropriate referencing style • Good problem solving skills and decision-making skills.
Third Class	Satisfactory 60 – 69.99	• Satisfactory knowledge and depth of understanding of principles and concepts. • Fair application of the theoretical concepts by considering of information systematically. • Evidence of reading a fair number of educational literature/research and where applicable workplace strategies, policies and procedures.	• Tasks completed with satisfactory accuracy. • Satisfactory skills in interpretation of results / and accomplishing practical tasks.	• Satisfactory skills for critical analysis, evaluation and synthesizing. • Satisfactory reflective practices, demonstrating fair personal learning and growth, insight into required professional values and principles and professional development planning. • Findings presented with conviction and satisfactory justification.	• Satisfactory presentation, logically structured, using accurate grammar and spelling. • Satisfactory cross-referencing and links to supporting evidence • Satisfactory ability to communicate the information verbally and in writing. • Satisfactory ability to work in groups and to manage teams. • Satisfactory ability to learn autonomously. • Satisfactory referencing and bibliography using appropriate referencing style • Satisfactory problem solving skills and

					exceptionally competent for decision-making.
	Acceptable / Pass 50 – 59.9	• Basic knowledge and depth of understanding of principles and concepts. • Basic ability to apply the theoretical concepts by considering of information systematically. • Evidence of reading a few number of educational literature/research and where applicable workplace strategies, policies and procedures.	• Tasks completed with minimum acceptable accuracy. • Acceptable skills in interpretation of results / and accomplishing practical tasks.	• Basic skills for critical analysis, evaluation and synthesizing. • Basic reflective practices, demonstrating some personal learning and growth, insight into required professional values and principles and professional development planning. • Findings presented with conviction and acceptable justification.	• Acceptable presentation, logically structured, using accurate grammar and spelling. • Acceptable cross-referencing and links to supporting evidence • Basic ability to communicate the information verbally and in writing. • Basic ability to work in groups and to manage teams. • Basic ability to learn autonomously. • Basic referencing and bibliography using appropriate referencing style • Basic problem solving skills and decision-making skills.
Fail / Poor <50		• Inadequate knowledge and understanding of principles and concepts. • Poor application of the theoretical concepts • No evidence of reading educational literature/research and where applicable workplace strategies, policies and procedures.	• Tasks not completed • Poor skills in interpretation of results / and accomplishing practical tasks.	• Poor skills for critical analysis, evaluation and synthesizing. • Poor reflective practices, demonstrating some personal learning and growth, insight into required professional values and principles and professional development planning. • Findings presented unconvincingly with improper justification.	• Poor presentation, logically structured, using accurate grammar and spelling. • Inadequate cross-referencing and links to supporting evidence • Poor ability to communicate the information verbally and in writing. • Poor ability to work in groups and to manage teams. • Poor ability to learn autonomously. • Inadequate referencing and bibliography using appropriate referencing style

				• Poor problem solving skills and decision-making skills.

Important Policies to be followed

1. Student Academic Integrity Policy*:

- MEC upholds the spirit of academic integrity in all forms of academic work and any form of violation of academic integrity shall invite severe penalty. Any benefit obtained by indulging in the act of violation of academic integrity shall be cancelled.
- MEC also reserves the right to notify the appropriate law enforcement authorities of any unlawful activity and to cooperate thereafter in any investigation of such activity.
- Faculty can conduct a viva to investigate and ascertain that the work submitted is student's own work as per the guidelines for the same. **A student can be given a maximum of 2 chances to attend the viva in such cases. It is expected that the student attends the viva during the first chance itself unless due to extenuating circumstances. If the student does not attend the viva in spite of being given 2 chances and fails to submit valid reasons, he/she will be awarded a fail in the module and this shall be counted as a case of academic integrity violation.**

All cases of violation of academic integrity on the part of the student shall fall under any of the below mentioned categories:

1. Plagiarism
2. Malpractice
3. Ghost Writing
4. Collusion
5. Other cases

If the student fails a module and has a proven case of academic integrity violation in this module, the student is required to re-register the module. This is applicable to first and second offence of academic integrity violation of plagiarism type

1.1. First Offence of Academic Integrity Violation:

1.1.1. Plagiarism

a. If a student is caught first time in an act of academic integrity violation during his/her course of study in any assignment other than project work and if the type of violation is plagiarism, then the student will be allowed to re-submit the assignment once as per the period allowed for re submission However, a penalty of deduction of 25% of the marks obtained for the resubmitted work will be imposed.

b. Period of re-submission: The student will have to re-submit the work within one week (5 working days) from the date he or she is advised to re-submit.

c. Re-submission of the work beyond the allowed period of resubmission will not be accepted and the assessment will be awarded a zero mark.

d. If the re-submitted work (within the allowed period of resubmission) is also found to be plagiarized, then that assessment component will be awarded a zero mark. It shall also contribute to the total count of academic integrity violation for that student.

e. If plagiarism is detected in UG Project work (Project 1, Project Planning and Project Design and Implementation), the above clauses do not apply, and the work will be summarily rejected. In these cases the student will be awarded a fail (F) grade and is required to reregister the module.

1.1.2. Malpractice / Ghostwriting / Collusion

If a student is caught first time in an act academic integrity violation during his/her course of study for an assessment component irrespective of coursework or end semester and if the type of violation is Malpractice/Ghostwriting/Collusion, then the student shall fail the module.

1.2. Second Offence of Academic Integrity Violation:

1.2.1. Plagiarism

a. If any student is caught second time in an act of academic integrity violation during his/her course of study and if the type of violation is plagiarism, then the student will not be allowed to resubmit the work, and s/he will directly be awarded zero for the work in which plagiarism is detected.

b. The student shall also receive a warning of suspension in such cases.

1.2.2. Malpractice/Ghostwriting/Collusion

a. If a student is caught a second time in an act academic integrity violation for an assessment component irrespective of coursework or end semester and if the type

of violation is Malpractice/Ghostwriting/Collusion, then the student shall fail the module.

b. The student shall also receive a warning of suspension in such cases.

1.3. Third Offence of Academic Integrity Violation:

a. If a student is caught a third time in an act of academic integrity violation for an assessment component irrespective of coursework or end semester then the student shall fail the module and also shall be suspended for one semester from the College, once the academic integrity violation case is confirmed by Institutional Assessment Review Committee.

b. The student shall be suspended for the immediate subsequent semester and can register for modules only after having served the suspension period fully. This is also applicable for semesters offered in block mode.

c. During the suspension period, the student shall have to mandatorily complete a course on academic integrity/writing before s/he can register for any modules.

d. During the period of suspension, the student shall be allowed to attempt supplementary examinations if s/he is eligible for the same. S/he shall also be allowed access to all college facilities permitted for a regular student except for registering the modules.

1.4. Fourth Offence of Academic Integrity Violation:

a. If a student is caught a fourth time in an act of academic integrity violation for an assessment component irrespective of coursework or end semester, the student shall fail the module and also shall be expelled from the College, once the case is confirmed by Institutional Assessment Review Committee.

b. The student shall be expelled from the college and all access to the college facilities and premises shall cease to exist. The documents shall be released only after getting the NOC (No Objection Certificate) from Registration Office.

c. `On termination, the student shall not be refunded any fees paid for the academic semester in which academic integrity violation was observed.

1.5. Other cases

If a student commits an act of academic integrity violation as per the definition of "other cases" mentioned in the previous section or of a different nature, student's case shall be forwarded to an Institutional Assessment Review Committee, Chaired by the Associate Dean, Academic Affairs. The committee shall investigate the case by means of a viva and/or a hearing of the parties concerned if required and shall take appropriate decision. The penalty that can be granted to a proven case of academic integrity violation which falls in this category of "other cases" can be a warning/component zero/ module fail/suspension/expulsion depending on the nature and gravity of the offence.

1.6. Types/Variations of cases of Plagiarism and associated actions

Type 1: In case plagiarism is detected in any component or part submission (submitted at different times) of one assessment (assignment), the deduction in marks will be applicable

for the whole assessment (assignment), even if only the component or part submission alone needs to be resubmitted.

Type 2: In case plagiarism is detected in a group assessment, all students of the group will be considered as having committed an act of plagiarism irrespective of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all students.

If some students in the group are eligible to re-submit (first offence) and others are not eligible, only eligible students will be allowed to re-submit within a period of one week and the penalty will be applied as per the policy for each student according to his / her history of violations.

Type 3: Combination of Type 1 and Type 2: In case plagiarism is detected in any component or part submission (submitted at different times) of a group assessment (assignment), the deduction in marks will be applicable for the whole assessment (assignment), even if only the component or part submission alone needs to be resubmitted. All students of the group would be considered as having committed an act of plagiarism irrespective of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all the students of the group.

If some students in the group are eligible to re-submit (first offence) and others are not eligible, only eligible students will be allowed to re-submit within a period of one week and the penalty will be applied as per the policy for each student according to his / her history of violation.

Type 4: Variation of Type 1 and Type 2: In cases where the assessment consists of components or part submissions that could be a group assessment component (e.g. group assignment) and an individual assessment component (e.g. individual reflection), the following will be applicable:

a. If plagiarism is detected in the group assessment component, all students of the group will be considered as having committed an act of plagiarism, irrespective of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all students of the group. In such cases the group assessment component will be resubmitted.

   If some students in the group are eligible to re-submit (first offence) and others are not eligible, only eligible students will be allowed to re-submit within a period of one week and the penalty will be applied for each student according to his / her history of violation.

b. If plagiarism is detected in the individual assessment component, the individual assessment component will be resubmitted - if the student is eligible for resubmission-. The policy will then be applied to that student alone.

c. In both cases (a) and/or (b), the deduction in marks will be applicable for the whole assessment (assignment).

1.7. Types/Variation of Cases of Multiple Offences

If student is caught with multiple violations of same or different nature in different modules of the same semester, they will be considered as one offence and student will be penalized for each violation according to the type of the offence.

If student is caught with multiple violations of same or different nature in the same module of the same semester, then they will be considered as different offences and each will contribute to the overall count of AIV. The student then shall be penalized for each violation according to the count and type of each offence.

** For further details Refer to MEC Student Academic Integrity Policy in Student Handbook.*

2. Late Submission Regulations:

It is the students' responsibility to check all relevant timelines related to assessments.

As per the Assessment Policy at MEC, late submissions are allowed for one week (5 working days) for all UG modules with a penalty. In such cases, a deduction of 5% of the marks obtained for the submitted work shall be imposed for each working day following the last date of submission till the date of actual submission. Assessment documents submitted beyond a period of one week (5 working days) after the last date of submission will not be accepted and will be awarded a zero for that assessment. In cases where the submission has been delayed due to extenuating circumstances, the student may be permitted to submit the work without imposing the late submission policy stated above. The extended period of submission will be one week from the original last date of submission. In such cases, the student is expected to submit the supporting certificates on or before the original last date of submission of the assessment and the decision of extension rests with faculty responsible for the assessment .The late submission policy shall be applied if the student fails to submit the work within one week of the original last date of submission.

Students may contact their teachers for clarification on specific details of the submission time if required.

3. Research Ethics and Biosafety Policy

To protect and respect the rights, dignity, health, safety, and privacy of research subjects involved including the welfare of animals and the integrity of environment, all student projects are expected to be undertaken as per the MEC Research Ethics and Biosafety Policy. Accordingly the following shall apply.

- Research and other enterprise activities shall be conducted by maintaining the high ethical standards consistent with national and international standards and conventions.
- Any research at MEC that is categorized as high-risk research shall be subject to review and approval by the Research Ethics and Biosafety Committee.

- Research activities involving collection of human or animal tissues and manipulation of microbial, animal or plant cells shall be subject to review and approval by the Research Ethics and Biosafety Committee.
- Participants involved in research must be informed about the purpose of research and intended uses of research findings. Written consent must be obtained from people involved prior to the commencement of research.
- Data obtained from participants must be treated with high confidence and should be used only for the intended purpose of research.

كـلية الشـرق الأوسـط
Middle East College

Assignment Evaluation Grid

System Programming and Component Based Technologies – Spring 2021

Student ID:_____ Student Name:_____ Session:__

Deliverables	Aspects	Mark Range: 0-10					Marks
Task 1	**Proposal Submission**	• Understanding of deliverables – a detail description of Task 2, Task 3 and Task 4 and Task 5. • List of resources • Timeline for completion of the given tasks.					
Deliverables	**Aspects**	**0**	**1-4**	**5-7**	**8-9**	**10**	**Marks**
Task 2	**Understanding from pre-class activities**	**No attempt**	**Incomplete /brief description of understanding/quizzes are partially attempted**	**Description of understanding is satisfactory/most of the quizzes are attempted but score in pre-class activities is less than average**	**Good description of understanding /all the quizzes are attempted but and score is good**	**Excellent description of understanding / all quizzes are attempted with full marks**	
Deliverables	**Aspects**	**0**	**1-9**	**10-15**	**16-18**	**19-20**	**Marks**
Task 3	**Operator evaluation**	**No attempt**	**Partially correct/incomplete**	**The number of operators is less than 5/ the number of expressions is less than 4/ the number of steps is less than 4/ solution partially correct**	**5 operators are used /3 different types/ 5 different values of operands and appropriate type/minor mistakes in the evaluation/one step is repeated or missing**	**5 operators are used , 3 different types, 5 different values of operands and appropriate type, correct evaluation with 4 steps**	
Deliverables	**Aspects**	**0**	**1-9**	**10-15**	**16-18**	**19-20**	**Marks**

Task 4.a	**SDLC-Analysis phase**	**No attempt**	**Partially correct/incomplete**	**Explanation is provided but lacks clarity/ application on the scenario is not detailed/ required numbers of input, output, calculations and classes is not respected**	**Good explanation, Good application on the scenario, required number of input, output, classes and process is provided but can be more pertinent**	**Definition of Analysis phase, clear explanation for the given scenario, minimum two classes identified, 4 input with explanation, 4 output with explanation, process including two calculations with explanation**	
Deliverables	**Aspects**	**0**	**1-9**	**10-15**	**16-18**	**19-20**	**Marks**
Task 4.b	**SDLC-Design phase**	**No attempt**	**Partially correct/incomplete**	**Incomplete flow chart/ overall correctness is satisfactory, some shapes are incorrect**	**Good flow chart/ the overall correctness is good. /relevant input, process and output**	**Correct shapes, includes start and end, input, output, calculation, condition**	
Deliverables	**Aspects**	**0**	**1-9**	**10-15**	**16-18**	**19-20**	**Marks**
Task 4.c	**SDLC-Coding phase**	**No attempt**	**Partially correct/incomplete**	**Basic structure of the program is correct/ no output, some syntax mistakes**	**No output but the program is good with minor mistakes**	**Correct program, comments added when useful, correct output is shown**	
Deliverables	**Aspects**	**0**	**1-9**	**10-15**	**16-18**	**19-20**	**Marks**
Task 5	**Program using conditions**	**No attempt**	**Partially correct/incomplete**	**Basic structure of the program is correct/ no output, some syntax mistakes**	**No output but the program is good with minor mistakes**	**Correct program, comments added when useful, correct output is shown**	

Deliverables	Aspects	0	1-9	10-15	16-18	19-20	Marks
Task 6	Program using conditions	No attempt	Partially correct/incomplete	Basic structure of the program is correct/ no output, some syntax mistakes	No output but the program is good with minor mistakes	Correct program, comments added when useful, correct output is shown	