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| **BTEC National Extended Diploma in** **Information Technology** | | |
| **Assessment Title: Testing and Documenting OO Programs** | | |
| Assessor: | Student: | Course code: S/W Dev Yr2 |
| Unit Number: 15 | Unit Title: OOP | Assessment Code: 15.03 |
| Hand out Date : Tue 7/1/20 | Hand in date: Tue 28/1/20 | Date handed in: |
| Resubmission date: | Resubmission authorised by: (BTEC only) | Date handed in: |

**Individual Target:**

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| **Scenario**  In your job as Junior Programmer you have designed and built a cinema ticket booking program.  **Task 1 - Testing**  As the program uses classes and objects, you now need to write unit tests to work out from the code in the class, any properties that can have data assigned to them and any methods that need to run. Write some test code for the class that instantiates an object that is based on the class.  The test code should use all of the properties and methods in the class/object and shows output onscreen to demonstrate that the properties and methods have been used by your test.  Also, you need to work out any values that the properties need and any values that the methods might use. This will be like black box testing so you will need to show why you have chosen that data and what effect you expect it to have on the test.  For evidence of the test provide:   * A code dump of the test code itself, * A test plan of the actual tests that it achieves. This could be like black box testing because you will have to devise test data that you can use with your test code to operate on the class/object (see the headings below that you could use in a table). Analyse the actual test results against expected results and suggest how to correct the problems, * The code for the class that it is testing, * Screenshot of the test code running.   The test plan could have these headings for the data you use in your test script:   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Reason for Test | Test data used | Expected Result | Actual Result | Reason for Difference | Error | Action |   **Task 2 - Evaluation**  Complete a Fitness for Purpose evaluation how far the program meets the specification, noting areas for improvement and what is needed to create a fuller version of the program, ensure you give details and that you explain why these improvements are necessary (think about a real Cinema!).  **Task 3 – Program Documentation**  You will need to supply complete documentation for your program. This may be done as one report and should include the full use case and class diagrams, the program specification, commented and properly laid out code, test plans and results, justifications for the tools and techniques used, etc. |

**What to hand in:**

* Test plans and results
* Program Documentation
* Fitness for purpose evaluation

**How to hand in your assessment**

This assessment must be uploaded to the VLE by the hand in date on the front of the assignment brief.

If you have a valid reason why you will not be able to hand in the work on time you will need to fill out and hand in an AE form to your Lead IV or Head of Department.

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| **Student declaration:**  I have read the Assignment Submission Procedure. I agree that this is my own work or my own work and that of other members of my group. It has not been copied (plagiarised) from any other source e.g. the internet, a book, another student or group of students. I know that I may FAIL this assignment if my Head of School proves that this is not my own work. | | | |
| Student signature |  | Date: |  |

For staff use only.

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| **Internal Verification** | This assessment has been verified and form IV8 completed: | IV name: | IV signature: | Date: |

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| SMOG INDEX: | 10.14 |

N.B. Test for readability on scenario and tasks only.

**Assessor marking grid**

**Student name:**

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| Grading criteria | Grading criteria | Achieved (✓)  Not attempted (NA)  Fail (F)  Resubmission (R) | Comments/Feedback | Target date  for resubmission |
| P5 | test an object oriented application |  |  |  |
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| M3 | analyse actual test results against expected results to identify discrepancies |  |  |  |
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| M4 | create technical documentation for the support and Maintenance of a computer program. |  |  |  |
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| D2 | evaluate an object oriented application. |  |  |  |
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| **General comments** | | | | |
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| **Actual Grade** | **Grading criteria** | P5 | M3 | M4 | D2 |  |  |  |  |  |  |  |  |  |  |  |  |
| **Achieved?** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Please note that the grade that you have been awarded is subject to confirmation by the awarding body.

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| I certify that the evidence submitted for this assignment is the learner’s own. The learner has clearly referenced any sources used in the work. I understand that false declaration is a form of malpractice. | |
| Assessor signature: | Date of marking: |

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| Student signature: | Date: |