**INTI International College Penang School of Computing**

**3+0 Bachelor of Science (Hons) in Computer Science, in collaboration with Coventry University, UK 3+0 Bachelor of Science (Hons) in Computing, in collaboration with Coventry University, UK**

**Coursework cover sheet**

**Section A - To be completed by the student.**

|  |  |
| --- | --- |
| Full Name: Yong Huey Syh | |
| CU Student ID Number: 14196357 | |
| Semester:1 | |
| Session:  **April 2023** | |
| Lecturer:  **Puteri Nursyawati Azzuri (puteri.azzuri@newinti.edu.my)** | |
| Module Code and Title:  **4067CEM Software Design** | |
| Assignment No. / Title:  **Continuous Assessment** | % of Module Mark:  **50** |
| Hand out Date:  **12 May 2023** | Due Date:  **Task 1: 02 June 2023, by 11.59pm.**  **Task 2: 07 July 2023, by 11.59pm**  **Task 3: 23 June 2023, by 11.59pm.**  **Task 4: 23 June 2023, by 11.59pm.**  **Task 5: 23 June 2023, by 11.59pm.** |
| Penalties: No late work will be accepted. If you are unable to submit coursework on time due  to extenuating circumstances, you may be eligible for an extension. Please consult the lecturer. | |
| Declaration: I/we the undersigned confirm that I/we have read and agree to abide by the University regulations on plagiarism and cheating and Faculty coursework policies and procedures. I/we confirm that this piece of work is my/our own. I/we consent to the appropriate storage of our work for plagiarism checking.  Signature(s): | |

**Section B - To be completed by the module leader**

|  |  |  |
| --- | --- | --- |
| Intended learning outcomes assessed by this work:   1. Understand and apply appropriate concepts, tools, and techniques to each stage of the software development. 2. Understand and apply design patterns to software components in developing new software. 3. Demonstrate an understanding of project planning and working to agreed deadlines, along with professional, interpersonal skills and effective communication required for software production.   5. Demonstrate an awareness of, and ability to apply, social, professional, legal, and ethical standards as documented in relevant laws and professional codes of conduct such as that of  the Malaysian National Computer Confederation. | | |
| Marking scheme | Max | Mark |
| 1. User Story Mapping | 20 |  |
| 2. Setting up a GitHub |  |
| Repository | 10 |
| 3. Creating a Class diagram and |  |
| design pattern selection | 30 |
| 4. Creating a Prototype User |  |
| Interface and Usability Testing | 20 |
| 5. Discuss the ethical issue |  |
| related to the software | 20 |
| Total | 100 |  |

**Task 3: Class diagram with its design pattern**

A screenshot of a computer screen

Description automatically generated

There are five classes inside this Student Course Management System. Which is “Student”, “Course”, “courseRegistration”, “Payment” and “Discussion”. For the “Student” class, it contains the information of a student such as student id, student name and what program they are studying. For “CourseRegistration” class, it is for the student to enrol or withdraw the course for upcoming semester. For “Course” class, which contain the courses of the student. For “Payment” class, which is for the student to pay for their course fees. For the “discussion” class, it is for the students collaborate with other student to work on their assignments.

**Class diagram with design pattern**

A screenshot of a computer

Description automatically generated

For the design pattern I choose is Factory method. Factory method is one of the creational design patterns. The parent class will be SCMS (Student Course Management System). The three child classes will be “CourseRegistration”, “Payment” and “Discussion”. Three of the classes existed because of the parent class.