



Daffodil International University

Department of Computer Science and Engineering

Faculty of Science and Information Technology

Final Examination, Semester: Fall 2019

Course Code: CSE 333

Course Title: Software Engineering

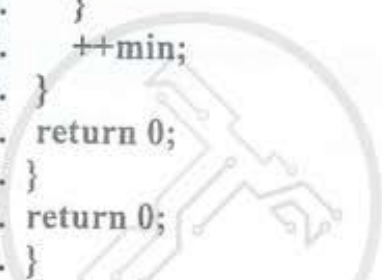
Time: 2:00 Hours

Total Marks: 40

[Answer all the Question]

1. DIU has many faculty members. Every faculty member has a name, address, phone number, email address and salary. Faculty members can take classes, check answer scripts, making questions. For check answer scripts and making questions no parameters are needed. A class is made of one faculty members and many students. Faculty members can create seminar. DIU has a number of students. Student has name, id, email and phone number. Students enroll seminar. Seminar has a title and a number. Seminar consists of different methods research, industry person and organizers. Industry person invite students for internship. Research Seminar and Promotional Seminar is a Seminar. Research Seminar has a particular domain. Promotional Seminar consists of different promotional products and ideas for students.
For recruiting a fresher in software industry, fresher must fill up a form. In the form, fresher needs to provide name, father's name, mother's name, date of birth, NID and submit a CV, Certificates and transcripts. After that, HR will select some fresher for test. HR will take a test based on programming skill. If he/she passes the test, HR will offer a remuneration for the post. If the fresher accepts the remuneration, HR will provide an offer letter to the fresher.
 - a. Construct an Object model for the above scenario. 10
 - b. Construct a BPM for recruiting and GUI for filling up the form. 5+5
2. According to Boehm, describe different types of Software projects. Assume that the size of a software product has been estimated to be 105 lac lines of source code. The average salary of software engineers are 91,000/- BDT per month. Determine Development Cost for both Embedded and Semidetached software product using Basic COCOMO model. 3+7
3. Give 4 differences between functional testing and structural testing. For the code below design 3 test suites using White box testing: 4+6
 1. `#include <stdio.h>`
 2. `int main() {`
 3. `int n1, n2, min;`
 4. `printf("Enter two positive integers: ");`
 5. `scanf("%d %d", &n1, &n2);`
 6. `if (n1>n2)`
 7. `min = n2;`
 8. `else min = n1;`
 9. `while (1) {`
 10. `if (min % n1 == 0 && min % n2 == 0) {`

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11.     printf("The LCM of %d and %d is %d.", n1, n2, min);
12.     break;
13. }
14. ++min;
15. }
16. return 0;
17. }
18. return 0;
19. }
```



----- Best of Luck 😊 -----

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