Daffodil International University
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Midterm Examination, Fall 2020 @ DIU Blended Learning Center
Course Code: CSE333 (Day), Course Title: Software Engineering
Level: 3   Term: 3   Section: All
Date: Thursday 05 November, 2020   Time: 09:00-01:00pm
Four hours (4:00) to support online open/case study based assessment   Marks: 25

Answer all the following questions

Nowadays women in our country are facing too much harassment. To ensure the safety of women, Bangladesh Govt. is thinking of launching an app that is focused on this issue. As a thriving future Software Engineer they need your help. They tried to explain their plans and thoughts down below:

First of all the app must contain all the laws related to women's safety as most of the women in our country is not aware about them. But each women must complete Registration before using the app. It's a one time job where a women must put her NID followed by her name, date of birth, occupation and her permanent and current address. Later on she can update occupation and current address from update profile section but needs to be logged in. As the govt. wants to know how many women are using this app as Admin users. They are also open to any suggestions which you think is needed to monitor or control as admin. This App is also a way to provide the fastest support possible to a women who is in need at the time of harassment, eve teasing or any other safety related issues. But the Govt. is not sure how! So they thought to create many processes like Contact Family/Friends, View nearby police stations (Login not needed), Emergency, File a report, Withdraw a report and Follow-up a report. They are also looking forward you to for suggesting any other necessary functionalities. To file a report a women have to be logged in to the system. Then enter the problem name, Location of the event, Date and tentative time like early morning, afternoon etc. They can also provide the culprit's name and picture if available otherwise they will leave the fields as it is (By default it will be selected unknown). After filing a Report one can Follow-up a Report where she will be able to see what actions were taken by the police or authority. This Status will be given by Admin. One can also withdraw a report after filing a report if she wants to. No question will be asked. Govt. is not sure about the Emergency process. How will they describe this! They are also not sure about the Contact Family/Friends. Like will there be any sub process for this or how many family members or friends they can communicate. What will be a feasible or maintainable number? They also need your help in thus regard.

1. a) Which software development model will be suited best for the above scenario and why?   [2+3]
   b) Complete the above story with detailed steps. You can add any number of new processes as you want but be sure to address the confusions of the Govt. with detail descriptions.

2. Draw the Use Case diagram of the case study described by you.   [5]

3. Provide Use Case description for "**Emergency**" and "**File a Report**" process.   [5]

4. Draw the activity diagram for the "**Contact Family/Friends**" process.   [5]

5. Draw the Sequence diagram for "**Emergency**" process and GUI for "**Contact Family/Friends**"   [5]
process.

Good Luck!☺