SOEN 6481
Software Systems Requirements Specification
Deliverable #2

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User Stories- Problem 6

Some Guidelines:

- The **Priority** of each user story is assigned using the **MoSCoW method as well as numerically**. The numerical method determines where the user story lies on the priority scale of the development of the software system.

- The **Estimate** for each user story is done using a **Fibonacci series pattern (0,1,1,2,3,5,8,13..)** where each integer denotes the number of units of time of development it would take for the task to be completed. The higher number selected as the estimate on the series denotes that the particular story takes higher time to develop.

US-ID-1

User Story: A user can enter option to select computer graphics or cryptography as the required application of the software.

Constraints: The user should be given the choice of selecting one of the operations from a dropdown menu and there should be no other selection possible apart from graphics or cryptography.

Acceptance Criteria:

- The selection should appear in a drop down menu where the user can click on one of the options to select.

- The further function call respective to the selection should be implemented after pressing a **Button** to initiate the process.

- The default selection of the drop down should be Computer Graphics.

Priority: Should-Have : 2

Estimate: 1/2

US-ID-2

User Story: A user can select the base of the constant required and the number of bits required to decide the colour specification for image rendering process.

Constraints:

- The value for both the bits and base have to be integers.

- The base needs to be in the range of 2 to 10.

- The value of bits should be such that the sequence received from the calculation of the constant stays in the memory and doesn't cause overflow of the memory stack.

Acceptance Criteria:

- The user inputs an integer in the textfields of base and bits.

- A button **Render Image** is pressed and a rendered image is presented on the display screen.

Priority: Must-Have : 2

Estimate: 1/2

US-ID-3

User Story: A <u>user</u> should <u>obtain the rendered image on the display screen</u> according to the bits selected so that they can be used as <u>different application in computer graphics</u>.

Constraint: The extension of the image should be either .png or .jpeg

Acceptance Criteria:

- The number of colors of which the rendered image is made of, should be equal to the base mentioned by the user in US- 2.
- The image rendered should be downloadable via a button.

Priority: Must-Have : 1

Estimate: 3

US-ID-4

User Story: A <u>user</u> can <u>send a request</u> according to the option selected and send plain text, bits and the base <u>so that a salted text can be created</u>.

Constraints:

- The value of the base should be in the range of 2 and 10.
- The value of bits needs to be equal to the number of bits in the plain text entered by the user.
- The bits in the plain text and also the number of bits should be such that sequence received after calculation of the constant and the salt generated should should not exceed the memory stack of the machine.
- The plain text can contain anything ranging from alphabets, integers or special characters.

Acceptance Criteria:

- The user enters the required plain text, bits and base after the selection of required option from US-1.
- Clicking of a button **Get Salted text** would result i carrying out the calculation of the constant, mixing with the plain text and generating the salted text.

Priority: Must-Have : 2

Estimate: 1

US-ID-5

User Story: A <u>user</u> can can receive a response that consists of the random number generated by the constant salted with plain text to use it in a hashing function.

Constraints: The number of bits of the random number generated should be equal to the number of bits in the plain text.

Acceptance Criteria:

- The user enters the required plain text, bits and base after the selection of required option from US-1.

- Clicking of a button **Get Salted text** would result in carrying out the calculation of the constant, mixing with the plain text and generating the salted text.

Priority: Must-Have : 1

Estimate: 3

Backward Traceability Matrix- Problem 7

Backward Traceability Matrix		
User Stories	Use Cases	Interview
US-ID-1	UC-1, UC-2	
US-ID-2	UC-1	IQ-3, IQ-5
US-ID-3	UC-1	IQ-3
US-ID-4	UC-2	IQ-6
US-ID-5	UC-2	IQ-9

Glossary

- **US-ID-x**: This identifier refers to the corresponding user story where x denotes the count of user story.

- **UC-x**: This identifier refers to the corresponding use case to which the user story can be traced back to. x here denotes the use case count where UC-1 refers to the use case corresponding to the Computer Graphics and UC-2 refers to use case corresponding to Cryptography.

- **IQ-x**: This identifier refers to the particular interview question to which the user story can be traced back to. x here denotes the particular question in the interview mentioned in Problem 2.