The software design should be included in a ***report***. The report should not exceed 20 pages and should have the following contents:

* **b)  Requirements Specification** 
  + Make a list of the required functionalities of the program described in your chosen game and variation.
  + State whether the design of the algorithm includes all required functionalities. If not, state which functionalities it omits.
  + Describe any additional functionalities that you have decided to include in the game variation. If necessary, explain why you have decided to include them (for example, do they make the game more fun, challenging, complete, etc?).

**c) Algorithm Design**

* Draw flowcharts AND write pseudocode to describe the steps and logic of the program. Please use the notation used in the lectures. If you have additional functionalities, these should also be included in the design.
* Include comments to explain the design of the algorithm, when necessary.
* **d) User Interface Design (‘Prototype’)**
* User Interface (UI) prototypes are used to communicate the interface design of a system.
* You should design a UI prototype for your chosen game variation; that is, you should create images showing what the player/user will be seeing while they are interacting with the program. For example, the images should illustrate how instructions are displayed to the user at the beginning of the interaction, the area where the user enters input, the screen displaying error messages, the screen where results are displayed to the user at the end of the interaction, etc.
* You can visualise and illustrate the interaction as a graphical user interface (screens with windows, buttons, menus, text boxes, icons, etc.) or as a console user interface (input and output printed in the console).
* You can draw the images using any simple software like MS Paint, MS PowerPoint, or any other software of your choice. You should use call-out boxes and comments to explain the images, when necessary.
* You may also provide actual screenshots. However, there is no implementation requirement at this stage. What is require is images depicting the UI design not Java code