Challenging Exercises (26-09-2022)

1. Students of a Programming class arrive to submit assignments. Their register numbers are stored in a LIFO list in the order in which the assignments are submitted. Write a program using array to display the register number of the ten students who submitted first. Register number of the ten students who submitted first will be at the bottom of the LIFO list. Hence pop out the required number of elements from the top so as to retrieve and display the first 10 students.

2. To facilitate a thorough net surfing, any web browser has back and forward buttons that allow the user to move backward and forward through a series of web pages. To allow the user to move both forward and backward two stacks are employed. When the user presses the back button, the link to the current web page is stored on a separate stack for the forward button. As the user moves backward through a series of previous pages, the link to each page is moved in turn from the back to the forward stack.
When the user presses the forward button, the action is the reverse of the back button. Now the item from the forward stack is popped, and becomes the current web page. The previous web page is pushed on the back stack. Simulate the functioning of these buttons using array implementation of
Stack. Also provide options for displaying the contents of both the stacks whenever required.