Assignment Questions on Java Stack

1. Creating and Adding Elements:

Write a Java program to create a Stack of strings. Push five different fruit names onto the stack and display the contents of the stack.

2. Accessing Elements:

Write a Java program to create a Stack of integers. Push the first ten natural numbers onto the stack. Then, print the top element of the stack without removing it.

3. **Updating Elements**:

Write a Java program to create a Stack of double values. Push five different values onto the stack. Replace the top value with a new value and display the updated stack.

4. Removing Elements:

Write a Java program to create a Stack of characters. Push five characters onto the stack. Pop the top character from the stack and display the remaining elements.

5. Checking Existence:

Write a Java program to create a Stack of strings. Push five city names onto the stack. Check if the stack contains the city "Paris" and display the result.

6. **Iterating through a Stack**:

Write a Java program to create a Stack of integers. Push the first ten even numbers onto the stack. Use a for loop and an Iterator to iterate through the stack and print each element.

7. Sorting a Stack:

Write a Java program to create a Stack of strings. Push five country names onto the stack. Sort the stack in alphabetical order and display the sorted stack.

8. Copying a Stack:

Write a Java program to create two Stack objects of integers. Push the first five prime numbers onto the first stack. Copy the contents of the first stack into the second stack and display both stacks.

9. Reversing a Stack:

Write a Java program to create a Stack of integers. Push the first ten natural numbers onto the stack. Reverse the stack and display the reversed stack.

10. Converting an Array to Stack:

Write a Java program to create an array of strings with five elements. Convert this array into a Stack and display the contents of the Stack.

11. Student Management System:

Write a Java program to create a Stack of Student objects. Each Student object should have properties such as id, name, and grade. Push five students onto the stack and display their details.

12. Library Management System:

Write a Java program to create a Stack of Book objects. Each Book object should have properties such as isbn, title, and author. Push five books onto the stack and provide functionality to search for a book by its isbn.

13. Employee Management System:

Write a Java program to create a Stack of Employee objects. Each Employee object should have properties such as id, name, and department. Push five employees onto the stack and provide functionality to remove an employee by their id.

14. Browser History Management:

Write a Java program to simulate a browser history using a Stack of String objects representing URLs. Implement functionalities to visit a new URL (push), go back (pop), and view the current page (peek).

15. Task Management System:

Write a Java program to create a Stack of Task objects. Each Task object should have properties such as id, description, and priority. Push five tasks onto the stack and provide functionality to update a task's priority based on its id.

