1. How do you create an instance of Vector? How do you add or insert a new element into a vector? How do you remove an element from a vector? How do you find the size of a vector?

* To create an instance of Vector, you can use the constructor of the Vector class. For example:

// Create a vector of integers with default capacity

Vector<Integer> v1 = new Vector<>();

// Create a vector of strings with initial capacity of 10

Vector<String> v2 = new Vector<>(10);

// Create a vector of doubles with initial capacity of 5 and capacity increment of 2

Vector<Double> v3 = new Vector<>(5, 2);

* To add or insert a new element into a vector, you can use the add or insertElementAt methods of the Vector class. For example:

// Create a vector of integers

Vector<Integer> v = new Vector<>();

// Add some elements at the end of the vector using add method

v.add(10);

v.add(20);

v.add(30);

// Insert an element at a specific index using insertElementAt method

v.insertElementAt(15, 1); // Insert 15 at index 1

* To remove an element from a vector, you can use the remove or removeElementAt methods of the Vector class. For example:

// Create a vector of strings

Vector<String> v = new Vector<>();

// Add some elements to the vector

v.add("apple");

v.add("banana");

v.add("cherry");

v.add("date");

// Remove an element by its value using remove method

v.remove("banana"); // Remove banana from the vector

// Remove an element by its index using removeElementAt method

v.removeElementAt(2); // Remove the element at index 2 (cherry) from the vector

* To find the size of a vector, you can use the size method of the Vector class. For example:

// Create a vector of doubles

Vector<Double> v = new Vector<>();

// Add some elements to the vector

v.add(1.2);

v.add(3.4);

v.add(5.6);

// Find the size of the vector using size method

int size = v.size(); // size is 3

1. How do you create an instance of Stack? How do you add a new element to a stack? How do you remove an element from a stack? How do you find the size of a stack?

* To create an instance of Stack, you can use the constructor of the Stack class. For example:

// Create a stack of integers

Stack<Integer> s1 = new Stack<>();

// Create a stack of strings

Stack<String> s2 = new Stack<>();

* To add a new element to a stack, you can use the push method of the Stack class. For example:

// Create a stack of integers

Stack<Integer> s = new Stack<>();

// Add some elements to the stack using push method

s.push(10);

s.push(20);

s.push(30);

* To remove an element from a stack, you can use the pop or remove methods of the Stack class. For example:

// Create a stack of strings

Stack<String> s = new Stack<>();

// Add some elements to the stack

s.push("apple");

s.push("banana");

s.push("cherry");

// Remove the top element of the stack using pop method

String top = s.pop(); // top is "cherry" and it is removed from the stack

// Remove an element by its value using remove method

s.remove("apple"); // Remove apple from the stack

* To find the size of a stack, you can use the size method of the Stack class. For example:

// Create a stack of doubles

Stack<Double> s = new Stack<>();

// Add some elements to the stack

s.push(1.2);

s.push(3.4);

s.push(5.6);

// Find the size of the stack using size method

int size = s.size(); // size is 3