

Q1: Create a class called Student that has attributes name, roll number and a static attribute university name.

- Make a static variable counter and initialize it to 0.
- Make a static set method for roll number that increments the counter and returns the counter.
- Create a parameterized constructor that sets the name as the parameter. To set the roll number call the static set roll number method.
- Create a static method that takes a parameter and sets the university name.
- Create a display method that displays the student's information name, roll number and university.
- In the main, call the set university name method and set it to "FAST University".
- Create three objects of the student class and display their information along with their roll number that should be different for each student.

Q2: Create a class called cars. The class has private attributes that include the name of the car, model year, engine and colour.

- Use set and get methods to set the values of all the private variables.
- Make a static variable number of cars that maintains the count of the cars.
- Create a parameterized constructor that initializes all the attributes.
- Create three cars. Display all the information of the car along with the total number of cars.

Q3: Create a class named Average Purchase that will contains an array of size n, if the user has made 3 orders today then then array size will be 3 for today.

Now, create a function to take input of the today's purchases.

Create another function to display the array.

Create a function to calculate the average purchases done today.

Q4: Create an ArrayList of String data type. The list will store different programming languages.

- Add five programming languages using the add method.
- Display the arraylist.

- Change the arraylist element at the second index.
- Remove the element at the last index and then display the list again.

Q5: Create an array list of marks that stores marks for 5 students. Display the whole class's result. Now, Check if any student has got < 50 marks then omit his/her result and calculate the average of class.

Q6: Create a billing application that generates the bill for A stationary shop containing items shown in table below.

Initialize the stock using a member function (use 2D array for that)

Create a billing function that calculates total bill as per the quantity selected by customer

Create another member function to show the invoice

Product code	Price/product
1	20
2	25