Daffodil International University **SET:**
Department of Software Engineering
Faculty of Science & Information Technology
Quiz 3: Fall 2024
Course Code: SE211, Course Title: Object-Oriented Concept
Level: 2; Term: 1; Section: All
Time: Marks:

Name: **ID:** **Sec:**

Q1)
```
public class JavaHungry {
   public static void main(String args[]) {
      int arr[] = {1, 2, 3};
      try {
         int num = 100 / arr[1];
         System.out.print("X");
         int num1 = 100 / arr[0];
         System.out.print("Y");
      } catch (ArithmeticException ex) {
         System.out.print("Z");
      } catch (NumberFormatException ex) {
         System.out.print("W");
      } catch (Exception ex) {
         System.out.print("V");
      } finally {
         System.out.print("U");
      }
      System.out.print(arr[3]);
   }
}
```

Tasks:

1. Predict the output of the above code.
2. Explain the flow of execution step by step.
3. Discuss the type of exceptions encountered and how they are handled in the code.

Q2) You are designing a program to manage a Vehicle System. Follow the structure below:

1. Create three interfaces:
   - Engine with a method void startEngine();
   - Wheels with a method int getNumberOfWheels();
   - Fuel with a method String getFuelType();
2. Create an abstract class:
   - AbstractVehicle that implements the Engine interface.
   - This class should provide an implementation for the startEngine() method.
   - Add an abstract method String getVehicleType();.
3. Create one concrete class:
   - Car that implements all three interfaces (Engine, Wheels, Fuel).
   - Provide simple implementations for all the methods in the interfaces.
4. Create another class:
   - Truck that extends the AbstractVehicle.
   - Implement the getVehicleType() method.

Show the tester class also. No need to show output. Just contract the code