Practical Sheet 01

(1)

(i) Create a base class **Vehicle** with the properties brand (String) and year (int). Provide a constructor to initialize these values.

(ii) Create a class **Car** that extends Vehicle. It should add a new property model (String) and have a constructor to initialize brand, year, and model.

(iii) In the main method, create an instance of Car and print the details of the vehicle.

(2)

(i) Create a class **Person** with a method introduce() that prints "Hello, I am a person."

(ii) Create a class **Employee** that extends Person and overrides the introduce() method to print a more specific introduction, e.g., "Hello, I am an employee."

(iii) In the Employee class, also call the super.introduce() method to invoke the base class method.

(iv) In the main method, create an instance of Employee and call introduce().

(3)

(i) Create a class **Shape** with a method draw().

(ii) Create two classes **Circle** and **Square**, both extending Shape and overriding the draw() method to print a message specific to the shape.

(iii) In the main method, demonstrate how Java uses dynamic method dispatch by calling draw() on a Shape reference that points to either a Circle or Square object.