

1)Write a Java Program to define a class, describe its constructor, overload the Constructors and instantiate its object

INPUT:

```
class Student{
private String name;
private int rool_no;
Student(){
this.name="Null";
this.rool_no=0;
this.Display();}
Student(String name){
  this.name=name;
  this.Display();}
Student(String name,int rool_no){
  this.name=name;
  this.rool_no=rool_no;
  this.Display();}
private void Display(){
  System.out.printf("Name: %-10s",this.name);
  System.out.printf(" Roll Number : %s\n",this.rool_no);}}
public class Ex_3_1 {
 public static void main(String[] args) {
  Student s1 = new Student();
  Student s3=new Student("Hari");
  Student s2 = new Student("Ram",20); }}
```

OUTPUT:

Name : Null Roll Number : 0

Name : Hari Roll Number : 0

Name: Ram Roll Number: 20

2)Write a Java Program to define a class, define instance methods for setting and Retrieving values of instance variables and instantiate its object

INPUT:

```
class Value{
private int integerValue;
private String string Value;
void SetValue(int a,String b){
  integerValue=a;
  stringValue=b;}
void getIntValue(){
System.out.println("Using Get Integer Value Method: "+integerValue);}
void getStringValue(){
  System.out.println("Using Get String Value Method: "+stringValue);}}
public class Ex_3_2 {
  public static void main(String[] args) {
    Value v1 = new Value();
v1.SetValue(25,"Car");
v1.getStringValue();
v1.getIntValue(); }
  }
```

OUTPUT:

Using Get String Value Method : Car

Using Get Integer Value Method: 25

3. Write a Java Program to define a class, define instance methods and overload them and use them for dynamic method invocation

INPUT:

```
public class Ex_3_3 {
  static void Message(){
    System.out.println("Default Message");
  }
  static void Message(String m){
    System.out.println("Custom Meassage : "+m);
  }
  static void Message(String m1,String m2){
    System.out.println("First Message : "+m1);
    System.out.println("Second Message : "+m2);
  }
  public static void main(String[] args) {
    Message();
    Message("Hello");
    Message("Hello", "Good Morning");
  }
}
```

OUTPUT:

Default Message

Custom Meassage : Hello

First Message: Hello

Second Message: Good Morning