1. **Replace a character a with e in following string without using inbuilt method. String = “Halo”. Replace character at 3rd index pos in upper case.**

```
public class MyClass {
   public static void main(String args[]) {
   String str = "Halo";
   char[] chars = str.toCharArray();
   for(int i=0;i<chars.length-1;i++){
      if(chars[i]=='a')
         chars[i]='e';
   }
   chars[2] = Character.toUpperCase(chars[2]);
   String strNew = new String(chars);
   System.out.println("Old String= "+str);
   System.out.println("New String= "+strNew);
   }
}
```

2. **Write a code to mask a given string. For e.g**
   SABBIR POONAWALA
   SAXXXX POXXXXXXX

```
public class MyClass {

   public static String maskName(String str, char mChar){

      String[] division = str.split(" ");
      String str1 = "";
      String str2 = "";
      //if(division[0].length() < 10)
         str1 = maskString(division[0], 2, division[0].length(), '*');
      //else
         str2 = maskString(division[1], 2, division[0].length(), '*');
      return str1 + " " +str2;
      //division[1];
   }
```

```
    public static String maskString (String nameDivision, int start, int end, char mChar){

       if(nameDivision == null || nameDivision.equals(""))
          return "";

       int maskLen = end - start;

       if(maskLen == 0)
          return nameDivision;

       StringBuilder sbMaskString = new StringBuilder(maskLen);
       for(int i = 0; i < maskLen; i++){
          sbMaskString.append(mChar);
       }
       return nameDivision.substring(0, start) + sbMaskString.toString()
 + nameDivision.substring(start + maskLen);
    }

    public static void main(String args[]) {
    String str = "ABHIJEET BHARGAVA";
    System.out.println("Unmasked String = "+str);
    System.out.println(" Masked  String = "+maskName(str, '*'));
    }
 }
```

3. Check if given string starts with A and Endwith t.

```
public class MyClass {

   public static void main(String args[]) {

   String str = "Artifact";

   if (str.startsWith("a")||str.startsWith("A")||str.endsWith("t")||str.endsWith("T"))

      System.out.println("The string "+str+" starts with A and ends with t ");

   }

}
```

4. Create a class Student with following attributes

Student
==========
rollNo int
studentFirstName String
studentLastName String
studentAge int

Override toString(), equals(), hashCode() without using tool.

```
public class Student {
    private int rollNo;
    private String studentFirstName;
    private String studentLastName;
    private int studentAge;

    public Student(int rollNo, String fName,String lName,int studentAge){
        this.rollNo = rollNo;
        this.studentFirstName = fName;
        this.studentLastName = lName;
        this.studentAge = studentAge;
    }
    @Override
    public String toString() {
        return (rollNo + "\t"+ studentFirstName+" "+studentLastName+"\t"+studentAge);
    }
    @Override
    public boolean equals(Object obj){
        if(obj==null){
            return false;
        }
```

```
        if(obj instanceof Student){
            Student stu = (Student)obj;
            if (stu.rollNo != this.rollNo && stu.studentAge == this.studentAge)
                return true;
            else
                return false;
        }
        return false;
    }
    //@Override
    public int hashcode(){
        int hashcode = 10;
        hashcode = (31 * hashcode) + studentAge;
        return hashcode;
    }

    public static void main(String args[]) {
        Student s = new Student(1001,"Abhijeet","Bhargava",23);
        System.out.println(s);
        System.out.println("Student1 AgeCalc = "+s.hashcode());
        Student s1 = new Student(1002,"Prashant","Mehra",23);
        System.out.println(s1);
        System.out.println("Student2 AgeCalc = "+s1.hashcode());
        System.out.println(s.equals(s1));
    }
}
```

5 Identify classes(java.lang) from API Documentation which can be used for static import.

Java.lang.boolean

Java.lang.byte

Java.lang.character

Java.lang.compiler

Java.lang.integer

Java.lang.math

Java.lang.strichMath

Java.lang.system