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SRN-PES2UG19CS013
OOAD with JAVA
Hands on assignment-2

Code

```java
import java.util.*;

abstract class TestQuestion{
    String question;

    abstract void readQuestion();
    abstract void tostring();
}

class ShortAnswer extends TestQuestion
{
int numlines=1;
void readQuestion()
{
    //String str1;
    Scanner input = new Scanner(System.in);
    System.out.print("Enter Question:");
    question= input.nextLine();
}
//void toString(String question)
//{
  //  System.out.println(question);
//}
void tostring()
{
    System.out.println("Short Answer Question -"+question);
    System.out.println("numlines -"+numlines);
}
}


class LongAnswer extends TestQuestion
{
int numlines;
void readQuestion()
{
```

```java
        Scanner input2 = new Scanner(System.in);
        System.out.print("\nEnter Question:");
        question= input2.nextLine();

     // Scanner input3 = new Scanner(System.in);
        System.out.print("\nEnter numlines:");
        numlines=input2.nextInt();
}

void tostring()
{
        System.out.println("Long Answer Question –"+question);
        System.out.println("numlines –"+numlines);
}
}


class MCQ extends TestQuestion
{
int numchoices;
String choices[]=new String[10];

void readQuestion()
{
        Scanner input2 = new Scanner(System.in);
        System.out.print("\nEnter Question:");
        question= input2.nextLine();

        System.out.print("\nEnter numchoices:");
        numchoices=input2.nextInt();

        //String choices[]=new String[numchoices];
        for (int i =0; i <numchoices+1;i++){
            System.out.print("\nEnter choice:");
            choices[i] = input2.nextLine();

        }

}
void tostring()
{

            System.out.println("MCQ–"+question);
            System.out.println("numchoices –"+numchoices);
            for (int i = 1; i <numchoices+1;i++){
                System.out.println("Choice "+i+"–"+choices[i]);
```

```java
        }
}


}

class TQManager2
{
    public static void main(String args[])
    {
        int numquestions;
        int choice;

        Scanner input3 = new Scanner(System.in);
        System.out.print("\nEnter number of questions:");
        numquestions = input3.nextInt();
        TestQuestion[] testquestions = new TestQuestion[numquestions];

        for (int i = 0; i <numquestions;i++){
         System.out.print("\nEnter 1 for shortanswer,2 for longanswer,3 for
mcq:");
         choice = input3.nextInt();

         switch(choice){

             case 1:
                 ShortAnswer obj=new ShortAnswer();
                 obj.readQuestion();
                 testquestions[i]=obj;
                 break;

             case 2:
                 LongAnswer obj2=new LongAnswer();
                 obj2.readQuestion();
                 testquestions[i]=obj2;
                  break;

             case 3:
             MCQ obj3=new MCQ();
             obj3.readQuestion();
             testquestions[i]=obj3;
                 break;

             default :
                         System.out.println("This is not a valid Menu Option!
Please Select Another");
```

```
                    break;

            }




        }
        for (int i = 0; i <numquestions;i++){
         testquestions[i].tostring();
        }



        }

    }
```

Output

```
Enter number of questions:2

Enter 1 for shortanswer,2 for longanswer,3 for mcq:3

Enter Question:mcq

Enter numchoices:3

Enter choice:
Enter choice:as

Enter choice:we

Enter choice:w

Enter 1 for shortanswer,2 for longanswer,3 for mcq:2

Enter Question:we

Enter numlines:2
MCQ-mcq
numchoices -3
```

```
Enter 1 for shortanswer,2 for longanswer,3 for mcq:2

Enter Question:we

Enter numlines:2
MCQ-mcq
numchoices -3
Choice 1-as
Choice 2-we
Choice 3-w
Long Answer Question -we
numlines -2
```