

what is the output of following program?

```
2 public class Test {  
3  
4     public static void main(String[] args) {  
5         int number;  
6         String str;  
7         try {  
8             str = "5";  
9             number = Integer.parseInt(str.substring(5));  
10            System.out.println("A");  
11        } catch (NumberFormatException e) {  
12            System.out.println("B");  
13        } catch (IllegalArgumentException e) {  
14            System.out.println("C");  
15        } catch (Exception e) {  
16            System.out.println("E");  
17        }  
18        finally {  
19            System.out.println("F");  
20        }  
21        System.out.println("G");  
22    }  
23}  
24 }
```

Select one:

E

F

G

When an exception is , the searches the try statement's catch clauses from top to bottom and passes control of the program to the catch exception.

thrown catch throws

JVM Exception Handler system

first matching exact super class

the output of the following program?

```
1 public class Cat {  
2     public String name;  
3  
4     public void parseName() {  
5         System.out.print("1");  
6         try {  
7             System.out.print("2");  
8             int x = Integer.parseInt(name);  
9             System.out.print("3");  
10            } catch(NullPointerException e) {  
11                System.out.print("4");  
12            }  
13            System.out.print("5");  
14        }  
15        public static void main(String [] args) {  
16            Cat felix = new Cat();  
17            felix.name = "Felix";  
18            felix.parseName();  
19            System.out.print("6");  
20        }  
21    }
```

Select one:

- a. 1256, followed by a stacktrace for a NumberFormatException
- b. 1256



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Question 2

Not yet answered

Marked out of
1.00[Flag question](#)

Select the method/s which are incorrectly declared inside the Writer class.

```
public abstract class Writer {  
    public void method1();  
    public final void method2() {};  
    public static void method3() {};  
    public abstract static void method4();  
    public abstract final void method5();  
}
```

Select one or more:

- method3
- method5
- method2
- method1
- method4



If your code does not handle an exception when it is thrown, it is dealt with by default exception handler .

the operating system

system debugger

default exception generator

Java Scheduler

Select the TRUE sentence(s) from the below

Select one or more:

- this and this() are used for different purposes in Java
- Constructors are declared as void methods as those do not return any value
- Constructor can take only one argument
- this() calls the default constructor of the current instance
- super.super() calls the default constructor of the parent class

e output of following program?

```
public class Test {  
    public static void main(String[] args) {  
        int number;  
        String str;  
        try {  
            str = "5";  
            number = Integer.parseInt(str.substring(5));  
            System.out.println("A");  
        } catch (NumberFormatException e) {  
            System.out.println("B");  
        } catch (IllegalArgumentException e) {  
            System.out.println("C");  
        } catch (Exception e) {  
            System.out.println("E");  
        }  
        finally {  
            System.out.println("F");  
        }  
        System.out.println("G");  
    }  
}
```

Select one:

E

When an exception is , the searches the try statement's catch clauses from top to bottom and passes control of the program to the catch exception.

thrown catch throws

JVM Exception Handler system

first matching exact super class

- `this` and `this()` are used for different purposes in Java
- `this()` calls the default constructor of the current instance
- Constructors are declared as void methods as those do not return any value
- Constructor can take only one argument
- `super.super()` calls the default constructor of the parent class

When an exception is **thrown**, the **Exception Handler** searches the try statement's catch block of the program to the **first matching** catch exception.

thrown

throws

JVM

system

exact

super class



What is the output of below program?

```
public class Example{  
    static int a=10;  
    public static void main(String args[]){  
        Example s1= new Example();  
        System.out.print("s1.a value :" + s1.a);  
        s1.a=20;  
        System.out.print("s1.a value :" + s1.a);  
    }  
}
```

Answer:

Question 3

Not yet answered

Marked out of
1.00

Flag question

Select correct answers about the following code

```
class Test{  
    int value;  
    int getValue(){  
        return value;  
    }  
    abstract void method1();  
}
```

Select one or more:

- Every abstract method in the Test class should be overridden by the child classes
- Test class is not useful since Test class can not be instantiated
- This program compiles and runs with no errors
- Test should be declared as an interface (not as a class)
- Test class must be declared as an abstract class.

Not yet answered

Marked out of
0.00

Flag question

What is the output of below program?

```
abstract class Tester {  
    public static void test() {  
        System.out.println("Testing...");  
    }  
}  
class laboratorian extends Tester {  
    public static void test() {  
        System.out.println("Testing blood");  
    }  
}  
public class Programmer extends Tester {  
    public static void test() {  
        System.out.println("Testing code");  
    }  
}  
public static void main(String[] args) {  
    Tester ob = new Programmer();  
}
```

Refer the class below and select the true statement/s

```
public abstract class Student {  
    private String StudentId;  
    public Student (String StudentId) {  
        this. StudentId = StudentId;  
    }  
    public String getId() {  
        return this.StudentId;  
    }  
    public abstract void study();  
}
```

Select one or more:

- Concrete subclasses of Student must implement the study () method
- Subclasses of Student cannot override getId () method
- No class can extend the Student class
- Subclasses of Student cannot override getId () method
- We cannot create object from Student class

Question 1

Not yet answered

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1.00

Flag question

What is the result of the following code?

```
1 int x = 5, y = 10;
2 boolean b = x < 0;
3 if(b = true) {
4     System.out.print(x);
5 }
6 else {
7     System.out.print(y);
8 }
9
```

Select one:

- 5
- Compiler error on line 3
- 10
- The code compiles but there is no output
- Compiler error on line 2



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Question 2

Not yet answered

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1.00

Flag question

In inheritance concept.

Select one or more:

- a parent class can have any number of child classes
- child class objects acquire a copy of all attributes and methods defined in the parent, other than private members
- child class can override existing methods of parent class
- a child class can have any number of parent classes
- during object creation, child class object executes child class constructor(s) only

Select one:

- Compilation Error
- Testing blood
- An exception
- Testing...
- Testing code

Consider the below program and select the true statement.

```
abstract class Writer {  
    abstract void write();  
    void read() {  
        System.out.print("reading..");  
    }  
}  
class programmer extends Writer {  
    programmer () {  
        super();  
    }  
    void write() {  
        System.out.print("writing..");  
    }  
}
```

Select one:

- It won't compile, because programmer constructor is using the super() while Writer has no constructor defined.
- It will compile with no errors.
- It won't compile, because method read() must be abstract since class Writer is abstract.
- It will run with no errors.
- It won't compile, because child class writer must override method read().

Select correct answers about the following code

```
class Test{  
    int value;  
    int getValue(){  
        return value;  
    }  
    abstract void method1();  
}
```

Select one or more:

- Test class is not useful since Test class can not be instantiated
- This program compiles and runs with no errors
- Test should be declared as an interface (not as a class)
- Test class must be declared as an abstract class
- Every abstract method in the Test class should be overridden by the child classes

Imagine there are three classes as "Person", "Employee" and "Teacher". All "Teacher" objects are both "Employees" and "Persons" too. You are supposed to implement this scenario using Java language and Object oriented concepts. Already the "Teacher" is inherited from "Employee" class using extends.

The Object Oriented Concept when a class has two or more extending classes is .

"Teacher" be implemented by extending "Person" class too using JAVA.

Hence ,

Person should be and Employee should be

What is the output of below program?

```
public class Example{
    static int a=10;
    public static void main(String args[]){
        Example s1= new Example();
        System.out.print("s1.a value :" + s1.a);
        s1.a=20;
        System.out.print("s1.a value :" + s1.a);
    }
}
```

Answer:

Consider the below program and select the true statement

```
abstract class Writer {  
    abstract void write();  
    void read() {  
        System.out.print("reading..");  
    }  
}  
class programmer extends Writer {  
    programmer () {  
        super();  
    }  
    void write() {  
        System.out.print("writing..");  
    }  
}
```

Select one:

- It will compile with no errors
- It wont compile, because method read() must be abstract since class Writer is abstract
- It wont compile, because programmer constructor is calling the super() while Writer has no constructor defined
- It wont compile, because class programmer must override method read()
- It will run with no errors

Not yet answered

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1.00

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QUESTION 10 OF 10
The following code

```
class Test{  
    int value;  
    int getValue() {  
        return value;  
    }  
    abstract void method1();  
}
```

Select one or more:

- Test should be declared as an interface (not as a class)
- This program compiles and runs with no errors
- Test class must be declared as an abstract class
- Test class is not useful since Test class can not be instantiated
- Every abstract method in the Test class should be overridden by the child classes

Select the method/s which are incorrectly declared inside the Writer class.

```
public abstract class Writer {  
    public void method1();  
    public final void method2() {};  
    public static void method3() {};  
    public abstract static void method4();  
    public abstract final void method5();  
}
```

Select one or more:

- method2
- method4
- method5
- method1
- method3

What is true about java constants in coding?

Select one or more:

- Constant will be inherited to sub classes
- A global constant should be default and static
- When declaring, all the letters in the constants should be upper case
- You cannot change the value in the constant
- Constants can remove magic numbers in the code

Drag and drop the suitable code snippets so that it will compile successfully and prints the output as *hi there*

```
public class Hello < [ ] > {  
    [ ]  
    public Hello ([ ]) {  
        this.t = t;  
    }  
    public String toString() {  
        return t.toString();  
    }  
    public static void main(String [] args) {  
        System.out.print(new Hello < [ ] > ("hi"));  
        System.out.print(new Hello("there"));  
    }  
}
```

K

T extends Number

T

String t

Integer t

Tt

Integer t

String t

Tt

T

String

Integer

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What is the output of the following program?

```
1 public class Cat {  
2     public String name;  
3  
4     public void parseName() {  
5         System.out.print("1");  
6         try {  
7             System.out.print("2");  
8             int x = Integer.parseInt(name);  
9             System.out.print("3");  
10        } catch(NullPointerException e) {  
11            System.out.print("4");  
12        }  
13        System.out.print("5");  
14    }  
15    public static void main(String [] args) {  
16        Cat felix = new Cat();  
17        felix.name = "Felix";  
18        felix.parseName();  
19        System.out.print("6");  
20    }  
21 }
```

Select one:

- a. 12456
- b. 1256
- c. 124, followed by a stack trace for a NumberFormatException
- d. 1256, followed by a stack trace for a NumberFormatException
- e. 12, followed by a stack trace for a NumberFormatException

**Question 6**

Not yet answered

Marked out of

1.00

[Flag question](#)

In inheritance concept:

Select one or more:

- a parent class can have any number of child classes
- child class objects acquire a copy of all attributes and methods defined in the parent, other than private members
- a child class can have any number of parent classes
- during object creation, child class object executes child class's constructor(s) only
- child class can override existing methods of parent class

Q1. Consider the following code

```
class Test{  
    int value;  
    int getValue() {  
        return value;  
    }  
    abstract void method1();  
}
```

Select one or more:

- Every abstract method in the Test class should be overridden by the child classes
- Test class is not useful since Test class can not be instantiated
- Test should be declared as an interface (not as a class)
- Test class must be declared as an abstract class
- This program compiles and runs with no errors



Question 7

Not yet answered

Marked out of
1.00

Flag question

Which of the following exception(s) is(are) will generate a compilation error if not handled?

Select one or more:

- NumberFormatException
- IOException
- ArrayIndexOutOfBoundsException
- ClassNotFoundException
- InterruptedException



Fill in the blanks with selecting the suitable **word** in the given below. (Please note that a **word** can be used more than once and words are available more than blanks)

Both wait() and sleep() methods throw [] and when thread wait in the synchronize block it [] the [] and [] forever. When another thread which uses the same [] which executes the [] method, the previous thread can [] its execution and thread change its state into [] state. But if thread execute [] method, it does not release its lock and another [] cannot acquire the lock.

notify

wait

ThreadSleepException

InterruptedException

lock

release

method

stop

object

block

Exception

thread

running

sleep

yield

resume

notifyAll

Question 6

Not yet answered

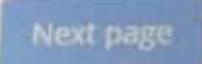
Marked out of
1.00

 Flag question

Select the TRUE sentence(s) from the below

Select one or more:

- this and this() are used for different purposes in Java
- super.super() calls the default constructor of the parent class
- this() calls the default constructor of the current instance
- Constructors are declared as void methods as those do not return any value
- Constructor can take only one argument

 Next page



```
abstract class Tester {  
    public static void test() {  
        System.out.println("Testing...");  
    }  
}  
  
class laboratorian extends Tester {  
    public static void test() {  
        System.out.println("Testing blood");  
    }  
}  
  
public class Programmer extends Tester {  
    public static void test() {  
        System.out.println("Testing code");  
    }  
}  
  
public static void main(String[] args) {  
    Tester ob = new Programmer();  
    ob.test();  
}
```

Select one:

- Testing
- Testing code
- Compilation error
- Testing blood

```
class Parent {  
    Parent (int x) {  
        System.out.println("Super");  
    }  
}  
public class Child extends Parent {  
    Child () {  
        // Line X  
        System.out.println("Sub 2");  
    }  
}
```

Which statement, when inserted at Line X, enables the code to compile?

Select one:

- Parent(10);
- super(10);
- super.Parent(10)
- this.Parent(10);
- this(10);

```
abstract class Writer {  
    abstract void write();  
    void read() {  
        System.out.print("reading..");  
    }  
}  
class programmer extends Writer {  
    programmer () {  
        super();  
    }  
    void write() {  
        System.out.print("writing..");  
    }  
}
```

Select one:

- It will run with no errors
- It wont compile, because programmer constructor is calling the super() while Writer has no constructor defined
- It will compile with no errors
- It wont compile, because method read() must be abstract since class Writer is abstract
- It wont compile, because class programmer must override method read()



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5
answered
out of
g question

```
class Parent {  
    Parent (int x) {  
        System.out.println("Super");  
    }  
}  
public class Child extends Parent {  
    Child () {  
        // Line X  
        System.out.println("Sub 2");  
    }  
}
```

Which statement, when inserted at Line X, enables the code to compile?

Select one:

- super();
- this.Parent(10);
- Parent();
- super.Parent(10);
- this();

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Suppose you need to work with a collection of elements that need to be sorted in their natural ordering, iterated in descending order, and each element has a unique string associated with its value. Which of the following collections classes in the java.util package best suit your needs for this scenario?

Select one:

- Vector
- HashMap
- TreeMap
- HashSet
- ArrayList

Select the method/s which are incorrectly declared inside the Writer class.

```
public abstract class Writer {  
    public void method1();  
    public final void method2() {};  
    public static void method3() {};  
    public abstract static void method4();  
    public abstract final void method5();  
}
```

Select one or more:

method1

method2

method3

method4

method5

Not yet answered

Marked out of
10.00

Flag question

When Developer press the relevant button, IDE it should perform the different actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Developer {
3     public static void main(String args[]) {
4         IDE ide=new IDE();
5         Receiver intendedreceiver = new Receiver();
6         System.out.println("Pressed save button!");
7         SaveAction saveaction = new SaveAction(intendedreceiver);
8         ide.setAction(saveaction);
9         ide.ExecuteAction();
10
11        System.out.println("Pressed saveAll button!");
12        SaveAllAction saveallaction = new SaveAllAction(intendedreceiver);
13        ide.setAction(saveallaction);
14        ide.ExecuteAction();
15    }
16
17 }
```

The screenshot shows a Java application window titled 'Developer [Java Application] C:\Java'. The window contains a text area with the following output:
<terminated> Developer [Java Application] C:\Java
Pressed save button!
Saving file...
Pressed saveAll button!
Saving all the files...

```
import java.util.*;
public class BreakIntoDigits{
    private int input;
    Scanner sc = new Scanner(System.in);
    System.out.println("Enter the 4 digit number");
    int input = sc.nextInt();
    Stack<Integer> theStack = new Stack<>();
    theStack.add(input);
```

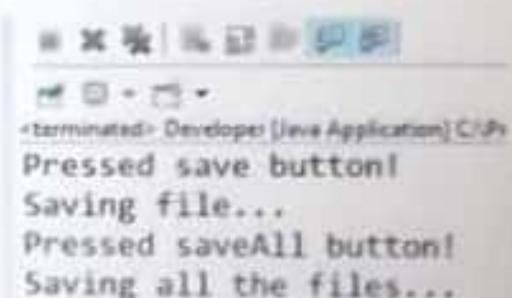
in the Eclipse integrated development environment (IDE) software, we can perform some actions to support "save" and "saveall" actions. When Developer press the relevant button, IDE it should perform the different actions.

1. Write the most suitable design pattern name that can be used in above scenario?

2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Developer {
3     public static void main(String args[]) {
4         IDE ide=new IDE();
5         Receiver intendedreceiver = new Receiver();
6         System.out.println("Pressed save button!");
7         SaveAction saveaction = new SaveAction(intendedreceiver);
8         ide.setAction(saveaction);
9         ide.ExecuteAction();
10
11
12         System.out.println("Pressed saveAll button!");
13         SaveAllAction saveallaction = new SaveAllAction(intendedreceiver);
14         ide.setAction(saveallaction);
15         ide.ExecuteAction();
16     }
17 }
```



```
* X % < > < > < > < >
terminated: Developer [Java Application] C:\...
Pressed save button!
Saving file...
Pressed saveAll button!
Saving all the files...
```

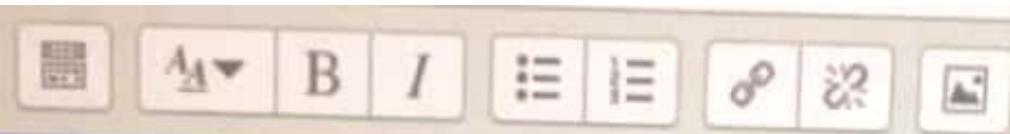
```
public class printingCapital extends Thread{  
  
    public void run(){  
        char[] arr = {'A','B','C','D','E','F','G','H','I','J','K','L','M','N','O','P','Q','R','S','T','U','V','W','X','Y','Z'};  
        for(char c : arr){  
            System.out.print(c);  
        }  
  
        System.out.println("Finish printing Letters");  
    }  
  
}  
  
public class printingASCII extends Thread{  
  
    public void run(){  
        int[] arr = {65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89};  
        for(int i : arr){  
            System.out.println(i);  
        }  
  
        System.out.println("Finish printing ASCII");  
    }  
  
}
```

Write a program to break the 4 digit number into single numbers using stack class. Get the 4 digit number as a keyboard input and then it should print the single digit line by line.

You can Refer the main class and the console output given below and implement the BreakIntoDigits class in given space.

```
2
3 import java.util.Stack;
4
5 public class Demo {
6
7    public static void main(String[] args) {
8        Stack<Integer> theStack = new Stack<Integer>();
9        BreakIntoDigits ob=new BreakIntoDigits();
10       ob.inputDigit(theStack);
11       ob.printDigit(theStack);
12
13    }
14
15 }
```

```
Enter the 4 digit number
1987
Digits after the break
1
9
8
7
```



```
Thread.sleep(500);  
catch (Interuption e ) {  
    System.out.In ("error")  
}  
}  
  
Thread Pat2 = new Thread (newRunnable() {  
override  
    Public void run() {  
        Public void PatPrint2(StChar s,int c)  
        {  
            for (int :=1; i<=c ; i++ ) {  
                System.print(s);  
            }  
            try {  
                Thread.sleep(500); }  
                catch (Interuption e ) {  
                    System.out.In ("error")  
                }  
            }  
  
Scanner scn= newScanner(system.in)  
Patternsgt=scn.nextChar();
```

Create a Thread program to print the upside and downside triangles together to generate the output once size is given. Re main program and Console Outputs and implement the UpSideTriangle class and the DownSideTriangle class in the given

```
public static void main(String[] args) {  
  
    Scanner scanner = new Scanner(System.in);  
    System.out.println("Enter Traingle size = ");  
    int size = scanner.nextInt();  
  
    Ex02 lock = new Ex02();  
    Thread thread = new Thread(new UpSideTriangle(lock, size));  
    thread.start();  
    Thread thread2 = new Thread(new DownSideTriangle(lock, size));  
    thread2.start();  
}
```

Output:

Console 11 - Java Application C:\Pro
<terminated> Ex02 [Java Application] C:\Pro
Enter Traingle size =

A diamond-shaped pattern of asterisks, centered on the page. It consists of five rows of asterisks, with the top and bottom rows having two asterisks, the middle row having four, and the two inner rows having three each.

Console 11 - Javadoc 2. Pr
<terminated> Ex02 [Java Applica
Enter Traingle size =

The top half of the diamond-shaped pattern from the previous screenshot, showing the five rows from the center up to the top vertex.

Console 11 - Javadoc 2.
<terminated> Ex02 [Java Appli
Enter Traingle size =

The bottom half of the diamond-shaped pattern from the previous screenshots, showing the five rows from the center down to the bottom vertex.

Question 22

Not yet answered

Marked out of
10.00

Flag question

Suppose you have a backup memory slot. If your primary memory is full and you need to store more data, you can store it in the backup memory slot. If you do not have this backup memory slot and you try to store additional data into your primary memory (when it is full), then that data will be discarded, you will receive exceptions, or you will encounter some peculiar behavior. So, a runtime check is necessary before storing the data, and then you can proceed.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1 import java.util.Scanner;
2 public class Demo {
3     public static void main(String args[]) {
4         IChoice ic = null;
5         Scanner sc=new Scanner(System.in);
6         System.out.println("Enter your choice");
7         int choice=sc.nextInt();
8         if(choice==1)
9             ic=new FirstChoice();
10        else
11            ic= new SecondChoice();
12        Context ob=new Context();
13        ob.setChoice(ic);
14        ob.showChoice();
15        System.out.println("END");
16    }
17 }
```

The screenshot shows a terminal window titled '<terminated> Demo [Java Application] C:\Program Files\'. The output is as follows:

```
Enter your choice
2
Store to Secondary Memory
END
```

Question 21

Not yet answered

Marked out of
10.00 Flag question

A Wrapping paper Art is printed using computer program and which is drawn using two concurrent Threads. You are allowed to enter pattern styles through keyboard inputs and you should select number of occurrences (count) to be printed the style. Each thread should print patterns one after the other and you should print the triangle shape using given style.

Refer the console output and implement the two threads in the given space below.

Output:

```
Enter Pattern 1 = +
Enter Pattern 2 = -
Enter count = 6
=====Threads start printing patterns=====
+
-
+-+
- - -
+++
- - - -
++ + +
- - - - -
++ + + +
- - - - -
++ + + + +
- - - - -
++ + + + +
```

 Quiz

1

B

16

ESSAY

21

FEEDB

24

Finish

Time l

What is the output of the following program?

```
1 public class Cat {
2     public String name;
3
4     public void parseName() {
5         System.out.print("1");
6         try {
7             System.out.print("2");
8             int x = Integer.parseInt(name);
9             System.out.print("3");
10        }catch(NullPointerException e) {
11            System.out.print("4");
12        }
13        System.out.print("5");
14    }
15    public static void main(String [] args) {
16        Cat felix = new Cat();
17        felix.name = "Felix";
18        felix.parseName();
19        System.out.print("6");
20    }
21 }
```

Select one:

- a. 124, followed by a stack trace for a NumberFormatException
- b. 1256
- c. 12, followed by a stack trace for a NumberFormatException
- d. 1256, followed by a stack trace for a NumberFormatException
- e. 12456



Sri Lanka Institute of Information Technology

Write a program to break the 4 digit number into single numbers using stack class. Get the 4 digit number as a keyboard input and then it should print the single digit line by line.

You can Refer the main class and the console output given below and implement the BreakIntoDigits class in given space.

```
2
3 import java.util.Stack;
4
5 public class Demo {
6
7     public static void main(String[] args) {
8         Stack<Integer> theStack = new Stack<Integer>();
9         BreakIntoDigits ob=new BreakIntoDigits();
10        ob.inputDigit(theStack);
11        ob.printDigit(theStack);
12
13    }
14
15 }
```

```
Enter the 4 digit number
1987
Digits after the break
1
9
8
7
```

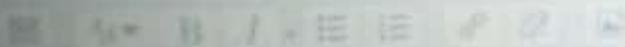
```
public class BreakIntoDigits{
    private int num;
```

Write a program where it prints the sentence words in the reverse order using the stack class. Get the sentence word by word as a keyboard input until user enter a word with a period. Once a word with period finds, it should print the reverse order of that sentence.

You can Refer the main class and the console output given below and implement the PrintReverse class in given space.

```
2
3 import java.util.Scanner;
4 import java.util.Stack;
5
6 public class Demo {
7
8    public static void main(String[] args) {
9        Stack<String> theStack = new Stack<String>();
10       PrintReverse ob=new PrintReverse();
11       ob.inputSentence(theStack);
12       ob.printSentence(theStack);
13
14    }
15
16 }
```

```
Enter the first word in your sentence
1
Enter a word by word
like
Enter a word by word
java.
Reverse sentence
java.
like
i
```



X



Online Exams

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Complete the following code so that it compile successfully and prints the output as *abbaccca*

```
StringBuilder sb = new StringBuilder();
```

```
sb.append("aaa").insert(1, "bb").insert(4, "cc");
```

```
System.out.println(sb);
```

insert 1 4

4 append 1

append 1 insert

Answer: `s1.a value:10 s1.a value:20`



Online Exams

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Question 7

Not yet answered

Marked out of
1.00

Flag question

When an exception is , the searches the try statement's catch clauses from top to bottom and passes control of the program to the catch exception.

thrown catch throws

JVM Exception Handler system

first matching exact super class

Next page

If your code does not handle an exception when it is thrown, it is dealt with by

default exception handler

the operating system

system debugger

default exception generator

Java Scheduler

What is the output of the following program?

```
1 public class Cat {  
2     public String name;  
3  
4     public void parseName() {  
5         System.out.print("1");  
6         try {  
7             System.out.print("2");  
8             int x = Integer.parseInt(name);  
9             System.out.print("3");  
10        } catch(NullPointerException e) {  
11            System.out.print("4");  
12        }  
13        System.out.print("5");  
14    }  
15    public static void main(String [] args) {  
16        Cat felix = new Cat();  
17        felix.name = "Felix";  
18        felix.parseName();  
19        System.out.print("6");  
20    }  
21}
```

Select one:

A. 1236

B. 12, followed by a stack trace for a NullPointerException



Online Exams

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Question 3

Not yet answered

Marked out of
1.00

Flag question

Select the TRUE sentence(s) from the below

Select one or more:

- Constructor can take only one argument
- super.super() calls the default constructor of the parent class
- this() calls the default constructor of the current instance
- Constructors are declared as void methods as those do not return any value.
- this and this() are used for different purposes in java

the output of the following program?

```
1 public class Cat {  
2     public String name;  
3  
4     public void parseName() {  
5         System.out.print("1");  
6         try {  
7             System.out.print("2");  
8             int x = Integer.parseInt(name);  
9             System.out.print("3");  
10            }catch(NullPointerException e) {  
11                System.out.print("4");  
12            }  
13            System.out.print("5");  
14        }  
15        public static void main(String [] args) {  
16            Cat felix = new Cat();  
17            felix.name = "Felix";  
18            felix.parseName();  
19            System.out.print("6");  
20        }  
21    }
```

Select one:

- a. 12456
- b. 1256
- c. 124 . followed by a stack trace for a NumberFormatException
- d. 1256 . followed by a stack trace for a NumberFormatException
- e. 12 . followed by a stack trace for a NumberFormatException

In inheritance concept.

Select one or more:

- a child class can have any number of parent classes
- a parent class can have any number of child classes
- child class can override existing methods of parent class
- child class objects acquire a copy of all attributes and methods defined in the parent. or
- during object creation, child class object executes child class constructor(s) only



Question 8

Not yet answered

Marked out of
1.00

Flag question

Drag and drop the suitable code snippets so that it will compile successfully and prints the output as *hihere*

```
public class Hello < [ ] > {  
    [ ]  
    public Hello ([ ]) {  
        this.t = t;  
    }  
    public String toString() {  
        return t.toString();  
    }  
    public static void main(String [] args) {  
        System.out.print(new Hello < [ ] > ("hi"));  
        System.out.print(new Hello("there"));  
    }  
}
```

T	T extends Number	K
Integer t	Tt	String t
Tt	Integer t	String t
T	String	Integer

Online Exams

Sri Lanka Institute of Information Technology

What is the output of below program?

```
public class Example{
    static int a=10;
    public static void main(String args[]){
        Example s1= new Example();
        System.out.print("s1.a value :" + s1.a)
        s1.a=20;
        System.out.print("s1.a value :" + s1.a)
    }
}
```

Answer: s1.a value:10s1.a value:20

Online Exams

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Which of the following is wrapper class for data type char?

Select one:

- a. Float
- b. Char
- c. Character
- d. String
- e. Letter

Which of the following statements are valid?

Select one or more:

- a. List < String > list = new Vector < String > ();
- b. HashSet < Number > hs = new HashSet < Integer > ();
- c. HashSet < Number,Number > hs = new HashSet < Integer, String > ();
- d. Map < String, ? extends Number > hm = new HashMap < String, Integer > ();
- e. HashSet < Number > hs = new HashSet <>();

What is the output of following program?

```
2 public class Test {  
3  
4     public static void main(String[] args) {  
5         int number;  
6         String str;  
7         try {  
8             str = "5";  
9             number = Integer.parseInt(str.substring(5));  
10            System.out.println("A");  
11        } catch (NumberFormatException e) {  
12            System.out.println("B");  
13        } catch (IllegalArgumentException e) {  
14            System.out.println("C");  
15        } catch (Exception e) {  
16            System.out.println("E");  
17        }  
18        finally {  
19            System.out.println("F");  
20        }  
21        System.out.println("G");  
22    }  
23}  
24 }
```

Select one:

- A
- B
- C

Which of the following statements are valid?

Select one or more:

- a. HashSet < Number > hs = new HashSet < Integer > ();
- b. List < String > list = new Vector < String > ();
- c. HashSet < Number > hs = new HashSet <>();
- d. Map < String, ? extends Number > hm = new HashMap < String, Integer > ();
- e. HashSet < Number,Number > hs = new HashSet <Integer, String>();

```
17    }
18    finally {
19        System.out.println("F");
20    }
21    System.out.println("G");
22}
23
24}
```

Select one:

- B
F
- C
E
- D
F
G
- E
E
F
- F
B
F
G

What is/are the correct sentence(s) from below

Select one or more:

- Java's new keyword allocates memory for a new object from the Heap and returns a reference to that memory area
- Like in C++, Java also requires memory allocation and deallocation explicitly by the programmer within the program code itself
- Java's GC (garbage collector) discards used/unused objects and programmers do not have to worry in deallocating memory
- Java does not use constructor calls when creating objects
- A Java source file can have multiple classes and only one public class

Question 12

Not yet answered

Marked out of
1.00

Flag question

≡ Quiz navigation

1	1	2	3
7	8	9	10
14	15	16	17

ESSAY QUESTIONS

21	22	23
----	----	----

FEEDBACK QUESTION

24

Finish attempt...

Time left 1:40:29

Given the following class definition:

```
public class PrintA extends Thread {  
    public void run() {  
        System.out.print("A");  
    }  
}
```

which of the statement is true about the following program?

```
public class PrintB {  
    public static void main(String [] args) {  
        Thread a = new PrintA();  
        a.run();  
        System.out.print("B");  
    }  
}
```

Select one:

- The output is always B
- The program does not compile
- The program generates an exception at runtime
- The output is always AB
- The output varies and is either AB or BA

Drag and drop the suitable code snippets so that it will compile successfully and prints the output as `hi there`

```
public class Hello < T extends Number > {
```

String t

```
public Hello ( String t ) {
```

```
    this.t = t;
```

```
}
```

```
public String toString() {
```

```
    return t.toString();
```

```
}
```

```
public static void main(String [] args) {
```

```
    System.out.print(new Hello < String > ("hi"));
```

```
    System.out.print(new Hello("there"));
```

```
}
```

```
}
```

K

T

Integer t

T t

tt

integer t

integer

T



Online Exams

Sri Lanka Institute of Information Technology

Which of the following statements are valid?

Select one or more:

- a. HashSet < Number > hs = new HashSet < Integer > ();
- b. HashSet < Number,Number > hs = new HashSet < Integer, String > ();
- c. List < String > list = new Vector < String > ();
- d. HashSet < Number > hs = new HashSet <>();
- e. Map < String, ? extends Number > hm = new HashMap < String, Integer > ();



In the Eclipse integrated development environment (IDE) software, we can perform some actions to support "save" and "saveall" actions. When Developer press the relevant button, IDE it should perform the different actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Developer {
3     public static void main(String args[]) {
4         IDE ide=new IDE();
5         Receiver intendedreceiver = new Receiver();
6         System.out.println("Pressed save button!");
7         SaveAction saveaction = new SaveAction(intendedreceiver);
8         ide.setAction(saveaction);
9         ide.ExecuteAction();
10
11        System.out.println("Pressed saveAll button!");
12        SaveAllAction saveallaction = new SaveAllAction(intendedreceiver);
13        ide.setAction(saveallaction);
14        ide.ExecuteAction();
15    }
16}
17}
```

The screenshot shows the Eclipse IDE interface with a terminal window open. The title bar says "terminated: Developer [Java Application] C:\Py". The terminal output is as follows:

```
Pressed save button!
Saving file...
Pressed saveAll button!
Saving all the files...
```



Online Exams

Sri Lanka Institute of Information Technology

on 7

et answered

ed out of

ag question

If your code does not handle an exception when it is thrown, it is dealt with by

default exception handler

the operating system

system debugger

default exception generator

Java Scheduler

[Next page](#)



A program prints the ASCII values and the ASCII value associated alphabet letter for the users. Assume one other thread, the associate letter.
Refer the below main program and Console Outputs and implement the PrintingASCII class and the PrintingCapital class below.

Main program:

```
1
2 public class Demo {
3
4     public static void main(String args[]) {
5         Object ob=new Object();
6         System.out.println("Printing Letter and Associate ASCII");
7         PrintingASCII thread1=new PrintingASCII(ob);
8         PrintingCapital thread2 =new PrintingCapital(ob);
9         thread1.start();
10        thread2.start();
11    }
12 }
13 }
```

Output:

```
Printing Letter and Associate ASCII
```

```
A
```

```
65
```

```
B
```

```
66
```

```
C
```

```
67
```

```
D
```

```
68
```

```
E
```

```
.....--continued up to Z as below--
```

```
88
```

```
Y
```

```
89
```

```
Z
```

```
Finish Printing Letters
```

```
90
```

```
Finish Printing ASCII
```

Online Exams

Sri Lanka Institute of Information Technology

Toy manufacturing company is making two types of toys as dogs and tigers. The process of creating a toy depends on the customer's preference, if customer enter 1, company will create a Dog, if 2 entered, a tiger toy will be manufactured. Each type of toy animal can speak and they prefer to do some actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Customer {
3     public static void main(String args[]) {
4         IToyAnimal preferredType=null;
5         Manufacture ob = new Manufacture();
6         System.out.println("Ordering a Toy Dog");
7         preferredType = ob.CreateToyAnimal(1);
8         preferredType.Speak();
9         preferredType.Action();
10
11         System.out.println("\nOrdering a Toy Tiger");
12         preferredType = ob.CreateToyAnimal(2);
13         preferredType.Speak();
14         preferredType.Action();
15     }
16 }
17
```

Terminal> Customer.java Application C:\Program
Ordering a Toy Dog
Dog says: Bow-Mow.
Dog is jumping

Ordering a Toy Tiger
Tiger says: Roar
Tiger is shaking the head



Suppose you have a backup memory slot. If your primary memory is full and you need to store more data, you can store it in the backup memory slot. If you do not have this backup memory slot and you try to store additional data into your primary memory (when it is full), then that data will be discarded, you will receive exceptions, or you will encounter some peculiar behavior. So, a runtime check is necessary before storing the data, and then you can proceed.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1 import java.util.Scanner;
2 public class Demo {
3     public static void main(String args[]) {
4         IChoice ic = null;
5         Scanner sc=new Scanner(System.in);
6         System.out.println("Enter your choice");
7         int choice=sc.nextInt();
8         if(choice==1)
9             ic=new FirstChoice();
10        else
11            ic= new SecondChoice();
12        Context ob=new Context();
13        ob.setChoice(ic);
14        ob.showChoice();
15        System.out.println("END");
16    }
17 }
```

The screenshot shows a terminal window titled '<terminated> Demo [Java Application] C:\Program Files\'. The output is as follows:

```
Enter your choice
2
Store to Secondary Memory
END
```

A program prints the ASCII values and the ASCII value associated alphabet letter for the users. Assume one thread prints the ASCII value and other thread, the associate letter.

Refer the below main program and Console Outputs and implement the PrintingASCII class and the PrintingCapital class in the given space below.

Main program:

```
1
2 public class Demo {
3
4     public static void main(String args[]) {
5         Object ob=new Object();
6         System.out.println("Printing Letter and Associate ASCII");
7         PrintingASCII thread1=new PrintingASCII(ob);
8         PrintingCapital thread2 =new PrintingCapital(ob);
9         thread1.start();
10        thread2.start();    ↴
11    }
12 }
13 }
```

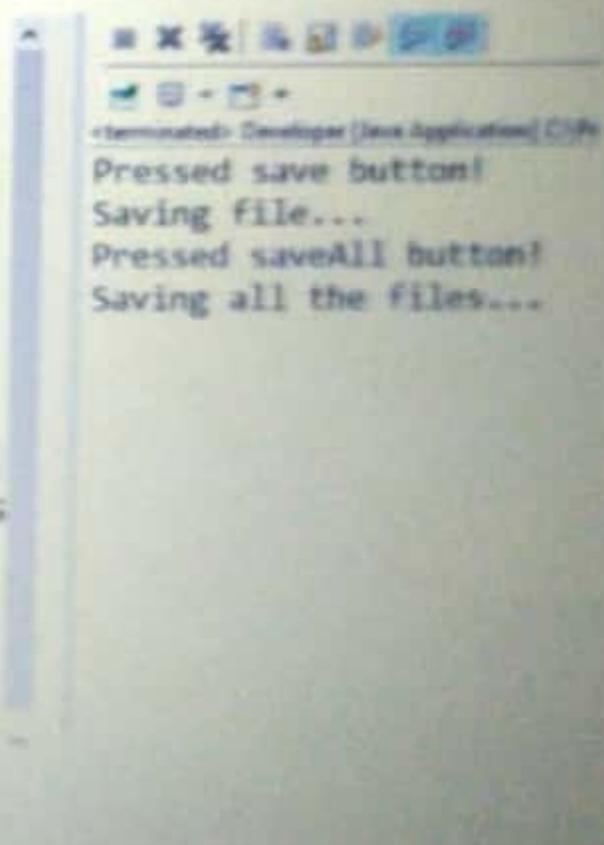
Output:

```
Printing Letter and Associate ASCII
A
65
B
66
C
```

2. Implement the relevant classes to implement the design pattern you studied in class.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Developer {
3     public static void main(String args[]) {
4         IDE ide=new IDE();
5         Receiver intendedreceiver = new Receiver();
6         System.out.println("Pressed save button!");
7         SaveAction saveaction = new SaveAction(intendedreceiver);
8         ide.setAction(saveaction);
9         ide.ExecuteAction();
10
11         System.out.println("Pressed saveAll button!");
12         SaveAllAction saveallaction = new SaveAllAction(intendedreceiver);
13         ide.setAction(saveallaction);
14         ide.ExecuteAction();
15     }
16 }
17 }
```



The screenshot shows a Java application window titled "Developer (Java Application) [1]". The window contains a text area displaying the following output:

```
terminated> Developer (Java Application) [1]
Pressed save button!
Saving file...
Pressed saveAll button!
Saving all the files...
```

Write a program where it prints the sentence words in the reverse order using the stack class. Get the sentence word by word as a keyboard input until user enter a word with a period. Once a word with period finds, it should print the reverse order of that sentence.

You can Refer the main class and the console output given below and implement the PrintReverse class in given space.

```
2
3 import java.util.Scanner;
4 import java.util.Stack;
5
6 public class Demo {
7
8     public static void main(String[] args) {
9         Stack<String> theStack = new Stack<String>();
10        PrintReverse ob=new PrintReverse();
11        ob.inputSentence(theStack);
12        ob.printSentence(theStack);
13
14    }
15
16 }
```

```
Enter the first word in your sentence
i
Enter a word by word
like
Enter a word by word
java.
Reverse sentence
java.
like
i
```



gram where it prints the sentence words in the reverse order using the stack class. Get the sentence word by word as user enter a word with a period. Once a word with period finds, it should print the reverse order of that sentence. Refer the main class and the console output given below and implement the PrintReverse class in given space.

```
import java.util.Scanner;
import java.util.Stack;

public class Demo {

    public static void main(String[] args) {
        Stack<String> theStack = new Stack<String>();
        PrintReverse ob=new PrintReverse();
        ob.inputSentence(theStack);
        ob.printSentence(theStack);
    }
}
```

```
Enter the first word in your se
i
Enter a word by word
like
Enter a word by word
java.
Reverse sentence
java.
like
i
```



Question 23

Not yet answered

Marked out of
10.00

Flag question

Write a program where it prints the sentence words in the reverse order using the stack class. Get the sentence word by word as a keyboard input until user enter a word with a period. Once a word with period finds, it should print the reverse order of that sentence.

You can Refer the main class and the console output given below and implement the PrintReverse class in given space.

```
2
3 import java.util.Scanner;
4 import java.util.Stack;
5
6 public class Demo {
7
8     public static void main(String[] args) {
9         Stack<String> theStack = new Stack<String>();
10        PrintReverse ob=new PrintReverse();
11        ob.inputSentence(theStack);
12        ob.printSentence(theStack);
13
14    }
15
16 }
```

Enter the first word in your sentence
i
Enter a word by word
like
Enter a word by word
java.
Reverse sentence
java.
like
i



Assume that each Information Technology student needs to pass mathematics and also demonstrate soft skills (such as Critical Thinking, Team work and so on) in their Orientation to obtain their degrees. Coming Semesters, course will add some special papers to their courses based on their chosen paths (programming or Database).

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1 public class Demo {  
2  
3     public static void main(String args[]) {  
4         Orientation ob1= new SoftwareEngineering();  
5         System.out.println("Software Engineering paper");  
6         ob1.papers();  
7         ob1=new DataScience();  
8         System.out.println("\nData Science paper");  
9         ob1.papers();  
10    }  
11 }  
12 }
```

File Edit View Insert Cell Help - □
Demo.java (1 file) C:\Users\Hitesh\OneDrive\Desktop\Java
Software Engineering paper
Mathematics paper
Softskills paper
Object Oriented Programming paper

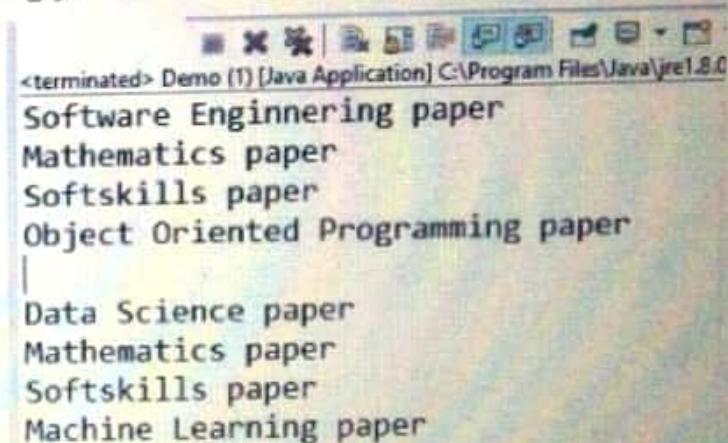
Data Science paper
Mathematics paper
Softskills paper
Machine Learning paper

Assume that each Information Technology student needs to pass mathematics and also demonstrate soft skills (such as Critical Thinking, Team work and so on) in their Orientation to obtain their degrees. Coming Semesters, course will add some special papers to their courses based on their chosen paths (programming or Database).

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Demo {
3
4     public static void main(String args[]) {
5         Orientation ob1= new SoftwareEngineering();
6         System.out.println("Software Engineering paper");
7         ob1.papers();
8         ob1=new DataScience();
9         System.out.println("\nData Science paper");
10        ob1.papers();
11    }
12 }
13
```



The screenshot shows a Java application window titled "Demo (1) [Java Application] C:\Program Files\Java\jre1.8.0". The console output is displayed in the window:

```
<terminated> Demo (1) [Java Application] C:\Program Files\Java\jre1.8.0
Software Enginnering paper
Mathematics paper
Softskills paper
Object Oriented Programming paper
|
Data Science paper
Mathematics paper
Softskills paper
Machine Learning paper
```

Write a program where it prints the sentence words in the reverse order using the stack class. Get the sentence word by word as a keyboard input until user enter a word with a period. Once a word with period finds, it should print the reverse order of that sentence.

You can Refer the main class and the console output given below and implement the PrintReverse class in given space.

```
2
3 import java.util.Scanner;
4 import java.util.Stack;
5
6 public class Demo {
7
8     public static void main(String[] args) {
9         Stack<String> theStack = new Stack<String>();
10        PrintReverse ob=new PrintReverse();
11        ob.inputSentence(theStack);
12        ob.printSentence(theStack);
13
14    }
15
16 }
```

```
Enter the first word in your sentence
i
Enter a word by word
like
Enter a word by word
java.
Reverse sentence
java.
like
i
```

≡ Quiz navigation

1	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20

ESSAY QUESTIONS

21	22	23
----	----	----

FEEDBACK QUESTION

24

Finish attempt...

Time left 0:11:44



2. Implement the relevant classes to demonstrate the design pattern you named.

You can refer to the main class given below and implement the classes accordingly.

```
1 import java.util.Scanner;
2 public class Demo {
3     public static void main(String args[]) {
4         IChoice ic = null;
5         Scanner sc=new Scanner(System.in);
6         System.out.println("Enter your choice");
7         int choice=sc.nextInt();
8         if(choice==1)
9             ic=new FirstChoice();
10        else
11            ic= new SecondChoice();
12        Context ob=new Context();
13        ob.setChoice(ic);
14        ob.showChoice();
15        System.out.println("END");
16    }
17 }
```



Question 21

Not yet answered

Marked out of
10.00

Flag question

A program prints the ASCII values and the ASCII value associated alphabet letter for the users. Assume one thread prints the ASCII value and other thread, the associate letter.

Refer the below main program and Console Outputs and implement the PrintingASCII class and the PrintingCapital class in the given space below.

Main program:

```
1
2 public class Demo {
3
4     public static void main(String args[]) {
5         Object ob=new Object();
6         System.out.println("Printing Letter and Associate ASCII");
7         PrintingASCII thread1=new PrintingASCII(ob);
8         PrintingCapital thread2 =new PrintingCapital(ob);
9         thread1.start();
10        thread2.start();
11    }
12 }
13 }
```

Output:

```
Printing Letter and Associate ASCII
A
65
B
66
C
67
D
68
E
```

<<continued up to Z as below>>

Write a program to break the 4 digit number into single numbers using stack class. Get the 4 digit number as a keyboard input and then it should print the single digit line by line.

You can Refer the main class and the console output given below and implement the BreakIntoDigits class in given space.

```
2
3 import java.util.Stack;
4
5 public class Demo {
6
7     public static void main(String[] args) {
8         Stack<Integer> theStack = new Stack<Integer>();
9         BreakIntoDigits ob=new BreakIntoDigits();
10        ob.inputDigit(theStack);
11        ob.printDigit(theStack);
12
13    }
14
15 }
```

```
Enter the 4 digit number
1987
Digits after the break
1
9
8
7
```

Question 21

Not yet answered

Marked out of
10.00

Flag question

A program prints the ASCII values and the ASCII value associated alphabet letter for the users. Assume one thread prints the ASCII value and other thread, the associate letter.

Refer the below main program and Console Outputs and implement the PrintingASCII class and the PrintingCapital class in the given space below.

Main program:

```
1
2 public class Demo {
3
4     public static void main(String args[]) {
5         Object ob=new Object();
6         System.out.println("Printing Letter and Associate ASCII");
7         PrintingASCII thread1=new PrintingASCII(ob);
8         PrintingCapital thread2 =new PrintingCapital(ob);
9         thread1.start();
10        thread2.start();
11    }
12 }
13 }
```

Output:

```
Printing Letter and Associate ASCII
A
65
B
66
C
67
```

Question 21

Not yet answered

Marked out of
10.00

Flag question

Write a program to break the 4 digit number into single numbers using stack class. Get the 4 digit number as a keyboard input and then it should print the single digit line by line.

You can Refer the main class and the console output given below and implement the BreakIntoDigits class in given space.

```
2
3 import java.util.Stack;
4
5 public class Demo {
6
7     public static void main(String[] args) {
8         Stack<Integer> theStack = new Stack<Integer>();
9         BreakIntoDigits ob=new BreakIntoDigits();
10        ob.inputDigit(theStack);
11        ob.printDigit(theStack);
12
13    }
14
15 }
```

Enter the 4 digit number

1987

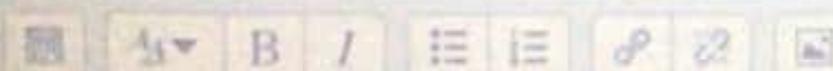
Digits after the break

1

9

8

7



A toy manufacturing company is making two types of toys as dogs and tigers. The process of creating a toy depends on the customer's preference. If customer enter 1, company will create a Dog, if 2 entered, a tiger toy will be manufactured. Each type of toy animal can speak, and they prefer to do some actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Customer {
3 public static void main(String args[]) {
4     IToyAnimal preferredType=null;
5     IManufacture ob = new Manufacture();
6     System.out.println("Ordering a Toy Dog");
7     preferredType = ob.CreateToyAnimal(1);
8     preferredType.Speak();
9     preferredType.Action();
10
11    System.out.println("\nOrdering a Toy Tiger");
12    preferredType = ob.CreateToyAnimal(2);
13    preferredType.Speak();
14    preferredType.Action();
15 }
16 }
17
```

```
<terminated> Customer [Java Application] C:\Program
Ordering a Toy Dog
Dog says: Bow-Wow.
Dog is jumping

Ordering a Toy Tiger
Tiger says: Roar
Tiger is shaking the head
```



Write a program where it prints the sentence words in the reverse order using the stack class. Get the sentence word by word as a keyboard input until user enter a word with a period. Once a word with period finds, it should print the reverse order of that sentence. You can Refer the main class and the console output given below and implement the PrintReverse class in given space.

```
2
3 import java.util.Scanner;
4 import java.util.Stack;
5
6 public class Demo {
7
8     public static void main(String[] args) {
9         Stack<String> theStack = new Stack<String>();
10        PrintReverse ob=new PrintReverse();
11        ob.inputSentence(theStack);
12        ob.printSentence(theStack);
13
14    }
15
16 }
```

```
Enter the first word in your sentence
i
Enter a word by word
like
Enter a word by word
java.
Reverse sentence
java.
like
i
```

Create a thread program to print the upside and downside triangles together to generate the output once size is given. Refer the below main program and Console Outputs and implement the UpSideTriangle class and the DownSideTriangle class in the given space below.

```
public static void main(String[] args) {  
  
    Scanner scanner = new Scanner(System.in);  
    System.out.println("Enter Triangle size = ");  
    int size = scanner.nextInt();  
  
    Ex02 lock = new Ex02();  
    Thread thread = new Thread(new UpSideTriangle(lock, size));  
    thread.start();  
    Thread thread2 = new Thread(new DownSideTriangle(lock, size));  
    thread2.start();  
}
```

Output:

```
Console [1]: C:\Users\Aman\IdeaProjects\Ex02\javaApplication1\Pro  
Enter triangle size = 10  
  
  
The image shows a diamond-shaped pattern of asterisks (*). It has 10 rows, with the top row having 1 asterisk and the bottom row having 10. The pattern is symmetric and inverted, starting from the top and ending at the bottom.
```

```
Console [2]: C:\Users\Aman\IdeaProjects\Ex02\javaApplication1\Pro  
Enter triangle size = 10  
  
  
The image shows a diamond-shaped pattern of asterisks (*). It has 10 rows, with the top row having 1 asterisk and the bottom row having 10. The pattern is symmetric and inverted, starting from the top and ending at the bottom.
```

```
Console [3]: C:\Users\Aman\IdeaProjects\Ex02\javaApplication1\Pro  
Enter triangle size = 10  
  
  
The image shows a diamond-shaped pattern of asterisks (*). It has 10 rows, with the top row having 1 asterisk and the bottom row having 10. The pattern is symmetric and inverted, starting from the top and ending at the bottom.
```

Write a program to break the 4 digit number into single numbers using stack class. Get the 4 digit number as a keyboard input and then it should print the single digit line by line.

You can Refer the main class and the console output given below and implement the BreakIntoDigits class in given space.

```
2  
3 import java.util.Stack;  
4  
5 public class Demo {  
6  
7     public static void main(String[] args) {  
8         Stack<Integer> theStack = new Stack<Integer>();  
9         BreakIntoDigits ob=new BreakIntoDigits();  
10        ob.inputDigit(theStack);  
11        ob.printDigit(theStack);  
12    }  
13 }  
14 }
```

Enter the 4 digit number

1987

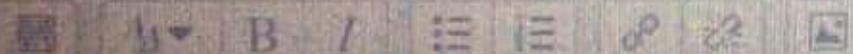
Digits after the break

1

9

8

7



Moodle

Sri Lanka Institute of Information Technology

AWARDING QUALITY EDUCATION

Question 22
Not yet answered
Marked out of 10.00
Flag question

Write a program to break the 4 digit number into single numbers using stack class. Get the 4 digit number as a keyboard input and then it should print the single digit line by line.

You can Refer the main class and the console output given below and implement the BreakintoDigits class in given space.

```
import java.util.Stack;
public class Demo {
    public static void main(String[] args) {
        Stack<Integer> theStack = new Stack<Integer>();
        BreakIntoDigits ob=new BreakIntoDigits();
        ob.inputDigit(theStack);
        ob.printDigit(theStack);
    }
}
```

Enter the 4 digit number
1987
Digits after the break
1
2
3
4

QUESTION PAPER
TECHNOLOGY
Time: 03:00
Page: 1

```
1 public class Customer {
2     public static void main(String[] args) {
3         ToyAnimal preferredType=null;
4         Manufacturer ob = new Manufacturer();
5         System.out.println("Ordering a Toy Dog");
6         preferredType = ob.createToyAnimal(1);
7         preferredType.speak();
8         preferredType.getAction();
9
10        System.out.println("Ordering a Toy Tiger");
11        preferredType = ob.createToyAnimal(2);
12        preferredType.speak();
13        preferredType.getAction();
14    }
15 }
```

Customer Customer [main] [Customer]
Ordering a Toy Dog
Dog says: Bow.
Dog is jumping

Ordering a Toy Tiger
Tiger says: Roar.
Tiger is shaking the head

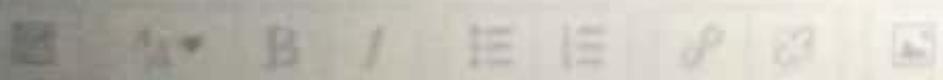
Assume that each Information Technology student needs to pass mathematics and also demonstrate soft skills (such as Critical Thinking, Team work and so on) in their Orientation to obtain their degrees. Coming Semesters, course will add some special papers to their courses based on their chosen paths (programming or Database).

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Demo {
3
4     public static void main(String args[]) {
5         Orientation obj= new SoftwareEngineering();
6         System.out.println("Software Engineering paper");
7         obj.papers();
8         obj=new DataScience();
9         System.out.println("\nData Science paper");
10        obj.papers();
11    }
12 }
```

The screenshot shows a Java application window titled "Demo (1) [Java Application] C:\Program Files\Java\jre1.8.0_251\bin\javaw.exe". The window displays the following text:
<terminated> Demo (1) [Java Application] C:\Program Files\Java\jre1.8.0_251\bin\javaw.exe
Software Enginnering paper
Mathematics paper
Softskills paper
Object Oriented Programming paper
|
Data Science paper
Mathematics paper
Softskills paper
Machine Learning paper





type of toy animal can speak, and they prefer to do some actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Customer {
3     public static void main(String args[]) {
4         IToyAnimal preferredType=null;
5         IManufacture ob = new Manufacture();
6         System.out.println("Ordering a Toy Dog");
7         preferredType = ob.CreateToyAnimal(1);
8         preferredType.Speak();
9         preferredType.Action();
10
11        System.out.println("\nOrdering a Toy Tiger");
12        preferredType = ob.CreateToyAnimal(2);
13        preferredType.Speak();
14        preferredType.Action();
15    }
16}
```

```
<terminated> Customer [Java Application] C:\Program
Ordering a Toy Dog
Dog says: Bow-wow.
Dog is jumping
Ordering a Toy Tiger
Tiger says: Roar
Tiger is shaking the head
```

```
1  
2 public class Customer {  
3     public static void main(String args[]) {  
4         IToyAnimal preferredType=null;  
5         IManufacture ob = new Manufacture();  
6         System.out.println("Ordering a Toy Dog");  
7         preferredType = ob.CreateToyAnimal(1);  
8         preferredType.Speak();  
9         preferredType.Action();  
10  
11        System.out.println("\nOrdering a Toy Tiger");  
12        preferredType = ob.CreateToyAnimal(2);  
13        preferredType.Speak();  
14        preferredType.Action();  
15    }  
16 }  
17
```

Implementation - Customer.java application C:\Program
Ordering a Toy Dog
Dog says: Bow-How.
Dog is jumping

Ordering a Toy Tiger
Tiger says: Roar
Tiger is shaking the head

A program prints the ASCII values and the ASCII value associated alphabet letter for the users. Assume one thread prints the ASCII value and other thread, the associate letter.

Refer the below main program and Console Outputs and implement the PrintingASCII class and the PrintingCapital class in the given space below.

Main program:

```
1
2 public class Demo {
3
4     public static void main(String args[]) {
5         Object ob=new Object();
6         System.out.println("Printing Letter and Associate ASCII");
7         PrintingASCII thread1=new PrintingASCII(ob);
8         PrintingCapital thread2 =new PrintingCapital(ob);
9         thread1.start();
10        thread2.start();
11    }
12 }
13 }
```

Output:

Printing Letter and Associate ASCII

A

65

B

66

C

67

D

68

E

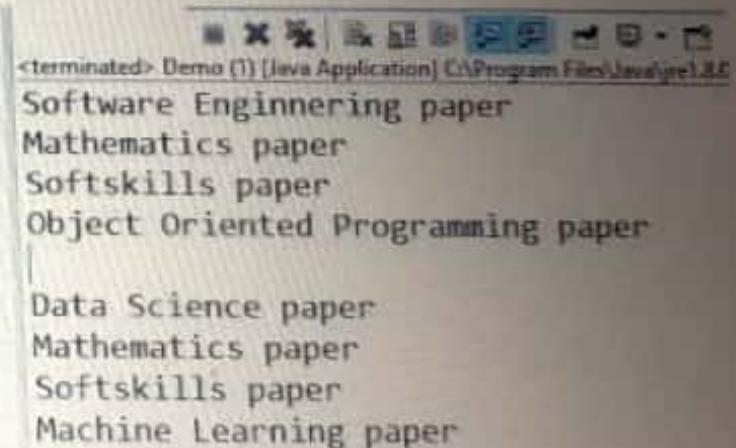
Assume that each Information Technology student needs to pass mathematics and also demonstrate soft skills (such as Critical Thinking, Team work and so on) in their Orientation obtain their degrees. Coming Semesters, course will add some special papers to their courses based on their chosen paths (programming or Database).

1. Write the most suitable design pattern name that can be used in above scenario?

2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Demo {
3
4     public static void main(String args[]) {
5         Orientation ob1= new SoftwareEngineering();
6         System.out.println("Software Engineering paper");
7         ob1.papers();
8         ob1=new DataScience();
9         System.out.println("\nData Science paper");
10        ob1.papers();
11    }
12 }
13
```



The screenshot shows a Java application window titled "Demo (1) [Java Application] C:\Program Files\Java\javac1.8.0". The window displays the following text:
Software Engineering paper
Mathematics paper
Softskills paper
Object Oriented Programming paper

Data Science paper
Mathematics paper
Softskills paper
Machine Learning paper

reate a Thread program to print the upside and downside triangles together to generate the output once size is given.
ffer the below main program and Console Outputs and implement the UpSideTriangle class and the DownSideTriangle
ss in the given space below

```
public static void main(String[] args) {  
  
    Scanner scanner = new Scanner(System.in);  
    System.out.println("Enter Triangle size = ");  
    int size = scanner.nextInt();  
  
    Ex02 lock = new Ex02();  
    Thread thread = new Thread(new UpSideTriangle(lock, size));  
    thread.start();  
    Thread thread2 = new Thread(new DownSideTriangle(lock, size));  
    thread2.start();  
}
```

Output:

Console 0 - Java Application [Ex02] - Terminated: Ex02 [Java Application] C:\Pro

Enter Triangle size = 10

* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *

Console 1 - Java Application [Ex02] - Terminated: Ex02 [Java Application] C:\Pro

Enter Triangle size = 10

* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *

Console 2 - Java Application [Ex02] - Terminated: Ex02 [Java Application] C:\Pro

Enter Triangle size = 10

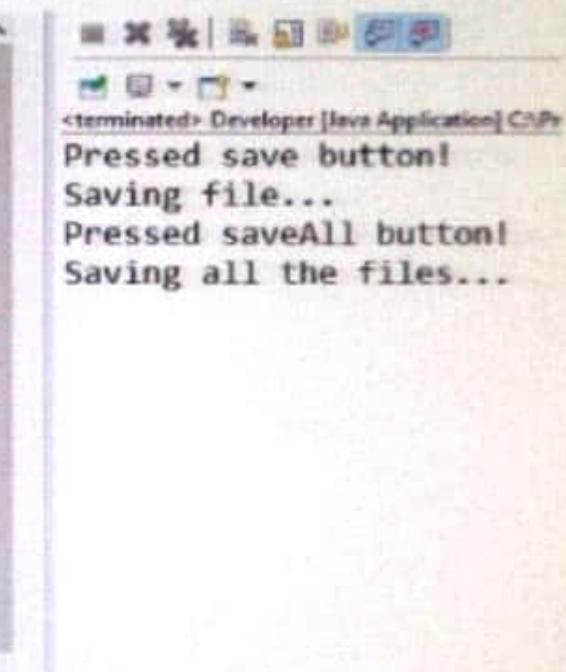
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *

actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Developer {
3     public static void main(String args[]) {
4         IDE ide=new IDE();
5         Receiver intendedreceiver = new Receiver();
6         System.out.println("Pressed save button!");
7         SaveAction saveaction = new SaveAction(intendedreceiver);
8         ide.setAction(saveaction);
9         ide.ExecuteAction();
10
11        System.out.println("Pressed saveAll button!");
12        SaveAllAction saveallaction = new SaveAllAction(intendedreceiver);
13        ide.setAction(saveallaction);
14        ide.ExecuteAction();
15    }
16
17 }
```



The screenshot shows a Java application window titled "Developer [Java Application] C:\Py". The console output is as follows:

```
Pressed save button!
Saving file...
Pressed saveAll button!
Saving all the files...
```

the given space below.

```
public static void main(String[] args) {  
  
    Scanner scanner = new Scanner(System.in);  
    System.out.println("Enter Traingle size = ");  
    int size = scanner.nextInt();  
  
    Ex02 lock = new Ex02();  
    Thread thread = new Thread(new UpSideTriangle(lock, size));  
    thread.start();  
    Thread thread2 = new Thread(new DownSideTriangle(lock, size));  
    thread2.start();  
}  
|
```

ut:

Console Problems
<terminated> Ex02 [Java Application] C:\Pro
Enter Traingle size =
10

An inverted triangle pattern of asterisks, starting with 10 stars at the top and decreasing by one star per row until it reaches a single star at the bottom.

Console Problems
<terminated> Ex02 [Java Application]
Enter Traingle size =
5

An inverted triangle pattern of asterisks, starting with 5 stars at the top and decreasing by one star per row until it reaches a single star at the bottom.

Console Problems
<terminated> Ex02 [Java Application]
Enter Traingle size =
2

An inverted triangle pattern of asterisks, starting with 2 stars at the top and decreasing by one star per row until it reaches a single star at the bottom.

Suppose you have a backup memory slot. If your primary memory is full and you need to store more data, you can store it in the secondary memory slot. If you do not have this backup memory slot and you try to store additional data into your primary memory when it is full, then that data will be discarded, you will receive exceptions, or you will encounter some peculiar behavior. So, a runtime check is necessary before storing the data, and then you can proceed.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1 import java.util.Scanner;
2 public class Demo {
3     public static void main(String args[]) {
4         IChoice ic = null;
5         Scanner sc=new Scanner(System.in);
6         System.out.println("Enter your choice");
7         int choice=sc.nextInt();
8         if(choice==1)
9             ic=new FirstChoice();
10        else
11            ic= new SecondChoice();
12        Context ob=new Context();
13        ob.setChoice(ic);
14        ob.showChoice();
15        System.out.println("END");
16    }
17 }
```

```
<terminated> Demo [Java Application] C:\Program Files\Java\jdk-11.0.1\bin\javaw.exe
Enter your choice
2
Store to Secondary Memory
END
```

Customer can go some actions.

Manufacture can do some actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Customer {
3     public static void main(String args[]) {
4         IToyAnimal preferredType=null;
5         IManufacture ob = new Manufacture();
6         System.out.println("Ordering a Toy Dog");
7         preferredType = ob.CreateToyAnimal(1);
8         preferredType.Speak();
9         preferredType.Action();
10
11        System.out.println("\nOrdering a Toy Tiger");
12        preferredType = ob.CreateToyAnimal(2);
13        preferredType.Speak();
14        preferredType.Action();
15    }
16 }
17
```

```
<terminated> Customer [Java Application] C:\Program
Ordering a Toy Dog
Dog says: Bow-Wow.
Dog is jumping
```

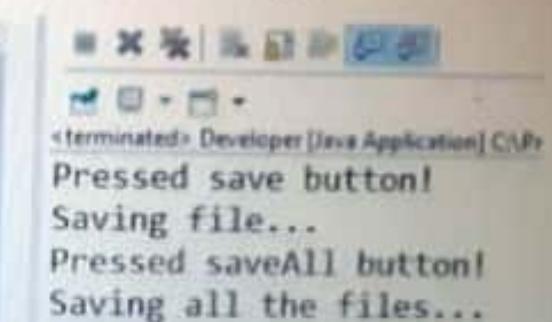
```
Ordering a Toy Tiger
Tiger says: Roar
Tiger is shaking the head
```

In the Eclipse integrated development environment (IDE) software, we can perform some actions to support "save" and "saveall" actions. When Developer press the relevant button, IDE it should perform the different actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Developer {
3     public static void main(String args[]) {
4         IDE ide=new IDE();
5         Receiver intendedreceiver = new Receiver();
6         System.out.println("Pressed save button!");
7         SaveAction saveaction = new SaveAction(intendedreceiver);
8         ide.setAction(saveaction);
9         ide.ExecuteAction();
10
11        System.out.println("Pressed saveAll button!");
12        SaveAllAction saveallaction = new SaveAllAction(intendedreceiver);
13        ide.setAction(saveallaction);
14        ide.ExecuteAction();
15    }
16}
```



Toy manufacturing company is making two types of toys as dogs and tigers. The process of creating a toy depends on the customer's preference. If customer enter 1, company will create a Dog. If 2 entered, a tiger toy will be manufactured. Each type of toy animal can speak, and they prefer to do some actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Customer {
3 public static void main(String args[]) {
4     IToyAnimal preferredType=null;
5     IManufacture ob = new Manufacture();
6     System.out.println("Ordering a Toy Dog");
7     preferredType = ob.CreateToyAnimal(1);
8     preferredType.Speak();
9     preferredType.Action();
10
11    System.out.println("\nOrdering a Toy Tiger");
12    preferredType = ob.CreateToyAnimal(2);
13    preferredType.Speak();
14    preferredType.Action();
15 }
16 }
```

```
<terminated> Customer [Java Application] C:\Progra
Ordering a Toy Dog
Dog says: Bow-Wow.
Dog is jumping

Ordering a Toy Tiger
Tiger says: Roar
Tiger is shaking the head
```



Question 22

Not yet answered

Marked out of
10.00

Flag question

Assume that each Information Technology student needs to pass mathematics and also demonstrate soft skills (such as Critical Thinking, Team work and so on) in their Orientation to obtain their degrees. Coming Semesters, course will add some special papers to their courses based on their chosen paths (programming or Database).

1. Write the most suitable design pattern name that can be use in above scehario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1
2 public class Demo {
3
4     public static void main(String args[]) {
5         Orientation ob1= new SoftwareEngineering();
6         System.out.println("Software Enginnering paper");
7         ob1.papers();
8         ob1=new DataScience();
9         System.out.println("\nData Science paper");
10        ob1.papers();
11    }
12 }
13 }
```

Software Enginnering paper
Mathematics paper
Softskills paper
Object Oriented Programming paper

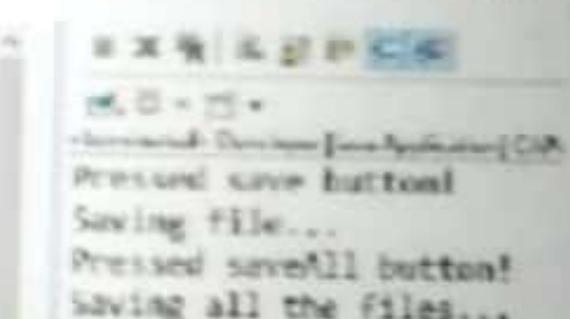
Data Science paper
Mathematics paper
Softskills paper
Machine Learning paper

In the Eclipse integrated development environment (IDE) software, we can perform some actions to support "save" and "saveall" actions. When Developer press the relevant button, IDE it should perform the different actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1  public class Developer {  
2      public static void main(String args[]) {  
3          IDE ide=new IDE();  
4          Receiver interndoreceiver = new Receiver();  
5          System.out.println("Pressed save button");  
6          SaveAction saveaction = new SaveAction(interndoreceiver);  
7          ide.setAction(saveaction);  
8          ide.ExecuteAction();  
9  
10         System.out.println("Pressed saveAll button");  
11         SaveAllAction saveallaction = new SaveAllAction(interndoreceiver);  
12         ide.setAction(saveallaction);  
13         ide.ExecuteAction();  
14     }  
15 }  
16 }  
17 }
```



Online Exams

SL Lanka Institute of Information Technology

Write a program where it prints the sentence words in the reverse order using the stack class. Get the sentence word by word as a keyboard input until user enter a word with a period. Once a word with period finds, it should print the reverse order of that sentence.

You can Refer the main class and the console output given below and implement the PrintReverse class. In given space.

```
1
2 import java.util.Scanner;
3 import java.util.Stack;
4
5 public class Demo {
6
7     public static void main(String[] args) {
8         Stack<String> theStack = new Stack<String>();
9         PrintReverse obnew PrintReverse();
10        ob.getInputSentence(theStack);
11        ob.printSentence(theStack);
12
13    }
14
15
16 }
```

```
Enter the first word in your sentence
1
Enter a word by word
like
Enter a word by word
java.
Reverse sentence
java.
like
1
```



Write a program where it prints the sentence words in the reverse order using the stack class. Get the sentence word by word as a keyboard input until user enter a word with a period. Once a word with period finds, it should print the reverse order of that sentence.

You can Refer the main class and the console output given below and implement the PrintReverse class in given space.

```
2
3 import java.util.Scanner;
4 import java.util.Stack;
5
6 public class Demo {
7
8     public static void main(String[] args) {
9         Stack<String> theStack = new Stack<String>();
10        PrintReverse ob=new PrintReverse();
11        ob.inputSentence(theStack);
12        ob.printSentence(theStack);
13
14    }
15
16 }
```

```
Enter the first word in your sentence
i
Enter a word by word
like
Enter a word by word
java.
Reverse sentence
java.
like
i
```

Question 22

Not yet answered

Marked out of
10.00

Flag question

A Wrapping paper Art is printed using computer program and which is drawn using two concurrent threads. You are allowed to enter pattern styles through keyboard inputs and you should select number of occurrences (count) to be printed the style. Each thread should print patterns one after the other and you should print the triangle shape using given style.

Refer the console output and implement the two threads in the given space below.

Output:

```
Enter Pattern 1 = +
Enter Pattern 2 = -
Enter count = 6
=====Threads start printing patterns=====
+
-
+ +
-
- -
+ + +
-
- - -
+ + + +
-
- - - -
+ + + + +
-
- - - - -
+ + + + + +
```

```
1 import java.util.*;
2 public class Demo {
3     public static void main(String args[]) {
4         IChoice ic = null;
5         Scanner sc=new Scanner(System.in);
6         System.out.println("Enter your choice");
7         int choice=sc.nextInt();
8         if(choice==1)
9             ic=new FirstChoice();
10        else
11            ic= new SecondChoice();
12        Context ob=new Context();
13        ob.setChoice(ic);
14        ob.showChoice();
15        System.out.println("END");
16    }
17 }
```

program where it prints the sentence words in the reverse order using the stack class. Get the sentence word by word as a keyboard input user enter a word with a period. Once a word with period finds, it should print the reverse order of that sentence.

Refer the main class and the console output given below and implement the Printreverse class in given space.

```
1 import java.util.Scanner;
2 import java.util.Stack;
3
4 public class Demo {
5
6     public static void main(String[] args) {
7         Stack<String> theStack = new Stack<String>();
8         PrintReverse obnew PrintReverse();
9         obnew.InputSentence(theStack);
10        obnew.printSentence(theStack);
11
12    }
13
14 }
```

```
Enter the first word in your sentence
1
Enter a word by word
like
Enter a word by word
java,
Reverse sentence
java,
like
like
```

Toy manufacturing company is making two types of toys as dogs and tigers. The process of creating a toy depends on the customer's preference, if customer enter 1, company will create a Dog, if 2 entered, a tiger toy will be manufactured. Each type of toy animal can speak, and they prefer to do some actions.

1. Write the most suitable design pattern name that can be used in above scenario?
2. Implement the relevant classes to demonstrate the design pattern you named in part 1.

You can refer to the main class given below and implement the classes accordingly.

```
1  
2 public class Customer {  
3     public static void main(String args[]) {  
4         IToyAnimal preferredType=null;  
5         IManufacture ob = new Manufacture();  
6         System.out.println("Ordering a Toy Dog");  
7         preferredType = ob.CreateToyAnimal(1);  
8         preferredType.Speak();  
9         preferredType.Action();  
10  
11         System.out.println("\nOrdering a Toy Tiger");  
12         preferredType = ob.CreateToyAnimal(2);  
13         preferredType.Speak();  
14         preferredType.Action();  
15     }  
16 }  
17
```

<terminated> Customer [Java Application] C:\Progra

Ordering a Toy Dog

Dog says: Bow-Wow.

Dog is jumping

Ordering a Toy Tiger

Tiger says: Roar

Tiger is shaking the head

A program prints the ASCII values and the ASCII value associated alphabet letter for the users. Assume one thread prints the ASCII value and other thread, the associate letter.
Refer the below main program and Console Outputs and implement the PrintingASCII class and the PrintingCapital class in the given space below.

Main program:

```
1
2 public class Demo {
3
4     public static void main(String args[]) {
5         Object ob=new Object();
6         System.out.println("Printing Letter and Associate ASCII");
7         PrintingASCII thread1=new PrintingASCII(ob);
8         PrintingCapital thread2 =new PrintingCapital(ob);
9         thread1.start();
10        thread2.start();
11    }
12 }
13 }
```

Output:

```
Printing Letter and Associate ASCII
A
65
B
66
C
67
D
68
E
```

--continued up to Z as below--

```
66
Y
69
Z
Finish Printing Letters
66
Finish Printing ASCII
```

ABCDEF

X +

netexam.slt.lk/mod/quiz/attempt.php

Cubase 5 Tutorial (L... LinkedIn (1) BAD DAY?? T... Meedium Dumaraye... (13) Bol Hu - Soch t... (2)

Examinations

Lockdown Browser

it19142

```
        break;
    case 'C' : printf( "Satisfactory\n" );
        break;
    case 'F' : printf( "Needs Improvement!\n" );
        break;
    default : printf( "Invalid grade!\n" );
}
printf( "Enter the grade : " );
scanf( "%*c%c" , &grade );
}
```

1. Calculate the statement coverage as a percentage when grade is equal to 'X'. (02 marks)
2. What are the values need to enter for "grade" variable to obtain full statement coverage? (03 marks)
3. Draw the control flow diagram for the above code. (05 marks)
4. How many branches in the code? (01 marks)
5. Calculate the branch coverage as a percentage when grade is equal to "X". (03 marks)
6. Calculate the minimum number of test cases required for a full branch coverage (Show the branch coverage as a percentage for each test case). (06 marks)

