

2022 - June Intake - Practical Test

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SLIT NetExam Sri Lanka Institute of Information Technology

Dashboard Examinations Lockdown Browser Practice Test

IT21166624 Nawod G.A.D. IT21166624 8:50:40

Question 1
Not yet answered
Marked out of 10.00
Flag question

Version E

Write a class to create a new exception, called XXXXXXXXXX. This should print out the error message **"Invalid IT number"** if the IT number is not according to the correct format. The valid IT number starts with the characters "IT" and followed **8 numbers**. Write another class called **student** that holds **StudentId** and **StudentName** which can be assigned through the constructor. It also should have a method called **display()** which prints the StudentId and StudentName. If the studentID is in incorrect format, the **display()** method should have proper try-catch statements to handle the exception. Create a class call **demo** with the main method to test the program.

Answer:

Quiz navigation

Finish attempt ...

Time left 0:38:04

1

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DELL

8:50 AM 10/26/2022

Question 1

Not yet answered

Marked out of 10

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Version B

You are requested to implement a code for a "MenInblack" video game. There is an **Alien** class to represent a monster and an **AlienPack** class that represents a pack including different types of aliens. **MenInBlack** class has different types of agents who are going to kill the aliens and obtain the scores.

You can refer to the output given in the Main class and adjust your code accordingly

```
public class Main {  
  
    public static void main(String args[]) {  
  
        //creating a alien pack with 5 different aliens  
        AlienPack pack1 = new AlienPack(5);  
        pack1.addAlien(new MarshmallowAlien(), 0);  
        pack1.addAlien(new OgreAlien(), 1);  
        pack1.addAlien(new OgreAlien(), 2);  
        pack1.addAlien(new SnakeAlien(), 3);  
        pack1.addAlien(new MarshmallowAlien(), 4);  
  
        MenInBlack AgentK = new MenInBlack(pack1);  
        AgentK.kill();  
        System.out.println("Your score is " + AgentK.getScore());  
    }  
}
```

out - Final2020 (run) Test Results

run:

Your score is 55

BUILD SUCCESSFUL (total time: 0 seconds)

1. Implement the **Alien** interface and declare **getScore()** method.
2. Create three classes called **MarshmalloAlien**, **OgreAlien** and **SnakeAlien**. Then implement the **Alien** interface in each class. MarshmalloAlien has 15, OgreAlien has 10 and SnakeAlien has 5 as their scores.
3. Similarly, create a class called **AlienPack** and implement the property of aliens array (**Alien[]**).
4. Implement the constructor in the **AlienPack** class. Distinguish the number of aliens there.
5. Implement the method called **addAlien()** which accept a specific alien and the index
6. Implement the method called **getAliens()** which returns the alien array
7. Implement the **MenInBlack** class and implement the property of score and **alienpack**(**AlienPack**).
8. Implement the constructor in the **MenInBlack** class, which accept and initialize the alienpack. Make the starting agent score as zero.
9. Implement the getters and setters for score and **alienpack**.
10. Implement the **kill()** method which kills the aliens in the alienpack and calculate the total score depending on each alien.

"MenInblack" video game has another level where while the agent is killing the aliens, alien will do a damage for the agent and he will reduce the score accordingly.

1. Implement the **MenInBlackLevel2** class which is a child of the **MenInBlack** class.
2. Implement the constructor in the **MenInBlackLevel2** class, which accepts and initializes the alienpack.
3. Override the kill method which calculates the total score depending on each alien. Additionally, generate a random number for each alien. Each time the random number is an ODD, the total score will be reduced by 2.

- Hint: `Math.random() * 10` will generate a random decimal number between 1 and 10.

seconds.

Implement a method called **InputAlarm()** which will input the three numbers from the keyboard and store those as the properties.

Use a Try Catch statement to prevent non-numerical values from being entered.

Throw and catch a user-defined exception for the following errors

- Hour (should be between 0 to 12)
- Minute, Second should be between (0 to 59)

Add the following methods.

- **ShowAlarm()** which should display the Alarm that has been set.
- **SetAlarm()** – To assign Hour, Minute, and Second to the properties. The above validations for Hour, Minute, and Second should be checked using if statements. If incorrect the value zero should be stored for the parameter.

Create the **MainApp** class which contains the **main()** method. Perform the following within the **main()** method.

- Create 2 instances of the **AlarmClock** class.
- Use the **InputAlarm()** method to assign one of the Alarms, and set the second Alarm using the **SetAlarm()** method.
- Use an ArrayList and store both AlarmClock objects in the ArrayList
- Iterate through the ArrayList and display the two Alarms that were set.

Question 1

Not yet answered

Marked out of
10.00

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Version F

Create a class called **AlarmClock**. The class should keep the following attributes:

Hour, Minute, Second

This class should have a constructor that initializes the three instance variables to 12 hours, 0 minutes, and 0 seconds.

Implement a method called **InputAlarm()** which will input the three numbers from the keyboard and store those as the properties.

Use a Try Catch statement to prevent non-numerical values from being entered.

Throw and catch a user-defined exception for the following errors

- Hour (should be between 0 to 12)
- Minute, Second should be between (0 to 59)

Add the following methods.

- **ShowAlarm()** which should display the Alarm that has been set.
- **SetAlarm()** – To assign Hour, Minute, and Second to the properties. The above validations for Hour, Minute, and Second should be checked using if statements. If incorrect the value zero should be stored for the parameter.

Create the **MainApp** class which contains the **main()** method. Perform the following within the **main()** method.

- Create 2 instances of the **AlarmClock** class.
- Use the **InputAlarm()** method to assign one of the Alarms, and set the second Alarm using the **SetAlarm()** method.

Version C

Implement a class named **RandNum**. The class should have a 5x5 2D array of 25 integers. The constructor should use the **random()** function to generate a random number in the range of 1 to 100 for each element in the array.

Implement a method(s) to calculate the **minimum, maximum, and average** of the 25 values.

Implement a method to display the values called **display()** of the array, minimum, maximum, and average of the 25 values.

Answer:

Finish attempt ...

- Include a method called **void Print()** to display the properties.

Extend the **Employee** class and make a class called **Manager** to represent the details of a Manager

- Include the following **data members** in the Manager class.

Department, ProductNo1, ProductNo2, ProductNo3 (ProductNos are integers, Department is a string)

- Your class should have a constructor that initializes all instance variables.
- Include a method called **void Read()** which will input the above values from the keyboard, and call the Employee class Read() method to input the EmpId, name, and address as well.
- Use a **Try Catch** in the Read() method to validate the entry of numbers for the three ProductNos.
- Include a method called **void Print()** to display the Manager details, and call the Employee class Print() method as well to display Employee details.

Answer:

Finish attempt ...

Activate W
Go to Settings

Question 1

Not yet answered

Marked out of
10.00

Flag question

Version G

You have been asked to develop a simple system to handle Employees in a Company.

Create a class called **Employee** to represent the details of an Employee.

- Include the following **data members** in the Employee class.
EmpId, name, address (all are string data)
- Your class should have a constructor that initializes all instance variables.
- Include a method called **void Read()** which will input the above values from the keyboard
- Include a method called **void Print()** to display the properties.

Extend the **Employee** class and make a class called **Manager** to represent the details of a Manager

- Include the following **data members** in the Manager class.
Department, ProductNo1, ProductNo2, ProductNo3 (ProductNos are integers, Department is a string)
- Your class should have a constructor that initializes all instance variables.
- Include a method called **void Read()** which will input the above values from the keyboard, and call the Employee class Read() method to input the EmpId, name, and address as well.
- Use a **Try Catch** in the Read() method to validate the entry of numbers for the three ProductNos.

Quiz navigation

Finish attempt ...

Time left 0:44:36



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Go to Settings to activate

Version A

Write a Lottery class that simulates a lottery.

The class should have an array of five integers named **lotteryNumbers**.

The constructor should use the `random()` function to generate a random number in the range of 0 through 9 for each element in the array.

The class should also have a function that accepts an array of five integers that represent a person's lottery picks. This method is to compare the corresponding elements in the two arrays and return the number of digits that match.

For example, the following shows the `lotteryNumbers` array and the user's array with sample numbers stored in each.

Sample Output:

User's Numbers: 4 2 9 7 3

Lottery Numbers: 7 4 9 1 3

Number of matching digits: 2

Matching digits: 2, 4

Answer:

≡ Quiz

Finish attempt

Time left 0:4

1

Version E

Write a class to create a new exception, called ***InvalidITNumberException***.

This should print out the error message "***Invalid IT number***" if the IT number is not according to the correct format.

The valid IT number starts with the characters "IT" and followed 8 numbers.

Write another class called ***student*** that holds ***StudentId*** and ***StudentName*** which can be assigned through the constructor.

It also should have a method called ***display()*** which prints the StudentId and StudentName.

If the studentID is in incorrect format, the ***display()*** method should have proper try-catch statements to handle the exception.

Create a class call ***demo*** with the main method to test the program.

Answer:

Version E

Write a class to create a new exception, called ***InvalidITNumberException***.

This should print out the error message "***Invalid IT number***" if the IT number is not according to the correct format.

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Write another class called ***student*** that holds ***StudentId*** and ***StudentName*** which can be assigned through the constructor.

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If the studentID is in incorrect format, the ***display()*** method should have proper try-catch statements to handle the exception.

Create a class call ***demo*** with the main method to test the program.

Answer:

Version D

Write a class named **CharArray** that has the following field:

`myCharArray[]` - This should be a character array.

In addition, the class should have the following constructor and other methods.

- Constructor: The constructor should accept the char array as arguments
- `swapFirstAndLast()`: The `swapFirstAndLast` method should swap the first element with the last element in the array.
- `DisplayArray()`: The `DisplayArray` method should display the characters in the array.
- `DispalyString()`: The `DispalyString` method should display the char elements as a string word in the array.

Answer: |