

Description

Complete the classes using the Specifications given below. Consider default visibility of classes, data fields, and methods unless mentioned otherwise.

Specifications

```
class definitions:
class Cue:
    data members:
        int pieces
        boolean retain
    Cue(int pieces, boolean retain): constructor with public visibility

class Retention:
    Retention(Cue c): constructor with public visibility
    data members:
        Cue cue=null
    method definitions:
        checkCue(int p) throws Exception:
            return type: String
            visibility: public

        playGame(int p) throws Exception:
            return type: String
            visibility: public

class CueException extends Exception:
    method definitions:
        CueException(String msg)
            visibility: public
```

Task

Class Cue

- define the int variable pieces.
- define the boolean variable retain

visibility: public

Task

Class Cue

- define the int variable pieces.
- define the boolean variable retain.
- define a constructor according to the above specifications.

Class Retention

Define the class according to the above specifications and Implement the below methods for this class:

-String checkCue(int p) throws Exception:

- Write a code to validate the criteria for getting the award.
- throw a CueException if retain is false with the message "Cue not retained".
- throw a CueException if p is less than pieces of cue variable with the message "More pieces required".
- throw a CueException if p is greater than pieces of cue variable with the message "Update required".
- If no above exception is found then return a string message "Cue updated".

-String playGame(int p) throws Exception:

- Write a code to play the game using the mentioned cue.
- If checkCue() method throws a CueException then returns a message "Cannot use this cue".(Use try-catch block)
- If it throws any other exception then return a message "Other exception".
- If no exception is found then return a message "Welcome to the game".

class CueException extends Exception

- Define CueException class derived from Exception class

Sample Input

- Write a code to play the game using the mentioned cue.
- If `checkCue()` method throws a `CueException` then returns a message "Cannot use this cue". (Use try-catch block)
- If it throws any other exception then return a message "Other exception".
- If no exception is found then return a message "Welcome to the game".

class `CueException` extends `Exception`

- Define `CueException` class derived from `Exception` class

Sample Input

```
Cue c=new Cue(13,true);
Retention r= new Retention(c);
String ans = r.playGame(5);
```

Sample Output

```
cannot use this cue
```

NOTE:

- You can make suitable function calls and use the `RUN CODE` button to check your `main()` method output.

Execution time limit

10 seconds

[REPORT AN ISSUE](#)

Java 8

UNSOLVED

```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 class Cue{
8     //Your Code Goes Here...
9 }
10
11 class Retention{
12     //Your Code Goes Here...
13 }
14
15 class CueException extends Exception{
16     //Your Code Goes Here...
17 }
18
19 public class Source {
20     public static void main(String args[]) throws Exception {
21         /* Enter your code here. Read input from STDIN. Print output to STDOUT.*/
22     }
23 }
```

Test Results

Custom Input

eclipse-workspace - test4N/src/com/test4N/Cue.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer x Type Hierarchy x JUnit

com.test4N

```
1 package com.test4N;
2
3 public class Cue {
4     public int pieces;
5     public boolean retain;
6     public Cue(int pieces, boolean retain) {
7         super();
8         this.pieces = pieces;
9         this.retain = retain;
10    }
11
12 }
13
```

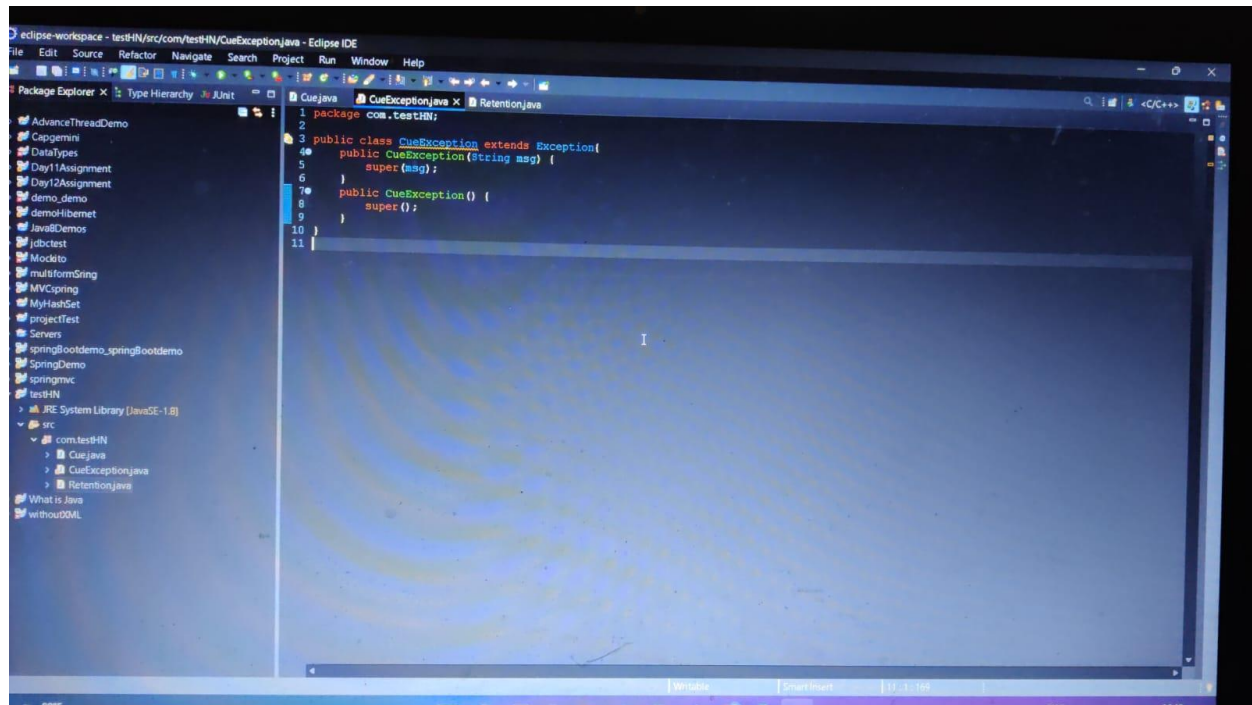
eclipse-workspace - test4N/src/com/test4N/Retention.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer x Type Hierarchy x JUnit

com.test4N

```
1 package com.test4N;
2
3 public class Retention {
4     Cue cue=null;
5
6     public Retention(Cue cue) {
7         super();
8         this.cue = cue;
9     }
10
11     public String checkCue(int p) throws Exception{
12         if(cue.retain==false)
13             throw new CueException("Cue not retained");
14         else if(p<cue.pieces)
15             throw new CueException("More pieces");
16         else if(p>cue.pieces)
17             throw new CueException("Update required");
18         else
19             return "Cue updated";
20     }
21
22     public String playGame(int p) throws Exception{
23         try {
24             checkCue(p);
25         } catch (CueException e) {
26             return "Cannot use this cue";
27         } catch (Exception e) {
28             return "Other exception";
29         }
30         return "Welcome to the game";
31     }
32 }
```

Task

Class Car

- define all the variables according to the above specifications.
- define a **constructor** with public visibility.

Class CarRacing

- define all the variables according to the above specifications.
- define

- participants as `ArrayList<Car> cars = new ArrayList<>();`

- define a **constructor** with public visibility.

Implement the below methods for this class:

-String carEntry(Car car);

- Write a code that adds the given car to the list of cars according to the given conditions.
- If the trackCount is equal to the length of the list cars then return "No Space".
- If the list cars have already an entry with the same id as the given parameter car then return "Already exists".
- If both the above condition does not satisfy then add the given parameter car into the list of cars and return "Start practicing".

-int getWinner(int trackLength);

- Write a code that returns the carId of the winner.
- If no entry exists then return -1.
- Else return the carId of the car with maximum time.
- The formula to calculate the time = trackLength * speed.
- If two cars have the same time then return the carId which is added to the list of cars first.

Sample Input

```
Car car = new Car(1,100);
CarRacing carRacing = new CarRacing(2);
```

Description

Complete the classes using the Specifications given below. Consider default visibility of classes, data fields, and methods unless mentioned otherwise.

Specifications

```
class definitions:
class Car:
    data members:
        int carId
        int speed
        visibility : public

    Car(int carId, int speed): constructor with public visibility

class CarRacing:
    data members:
        String ArrayList<Car> cars
        int trackCount
        visibility : public

    CarRacing(int trackCount): constructor with public visibility

method definitions:
    carEntry(Car car):
        return type: String
        visibility: public

    getWinner(int trackLength):
        return type: int
        visibility: public
```

Task

Java 8

UNSOLVED

```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 class Car{
8     // Define all data members and methods here
9 }
10
11 class CarRacing{
12     // Define all data members and methods here
13 }
14
15 public class Source {
16     public static void main(String args[]) throws Exception {
17         /* Enter your code here. Read input from STDIN. Print output to STDOUT.*/
18     }
19 }
```

Test Results

Custom Input


```

class Car{
    public int carId;
    public int speed;
    public Car(int carId, int speed) {
        super();
        this.carId = carId;
        this.speed = speed;
    }
}

class CarRacing{
    ArrayList<Car> cars=new ArrayList<>();
    int trackCount;
    public CarRacing(int trackCount) {
        super();
        this.trackCount = trackCount;
    }
    public String getEntry(Car car) {
        if(cars.size()==trackCount)
            return "No Space";
        else if(cars.contains(car))
            return " Already Exists";
        else {
            cars.add(car);
            return "Start practicing";
        }
    }
    public int getWinner(int trackLength) {
        int maxtime,time;
        Car maxtimecar;
        if(cars.size()==0)
            return -1;
        else {
            maxtimecar=cars.get(0);
            maxtime=maxtimecar.speed*trackLength;
            for(int i=1;i<cars.size();i++) {

```

Writable

Smart Insert

8:3


```
Order.java Medicine.java Customer.java Category
70 public CarRacing(int trackCount) {
71     super();
72     this.trackCount = trackCount;
73 }
74 public String getEntry(Car car) {
75     if(cars.size()==trackCount)
76         return "No Space";
77     else if(cars.contains(car))
78         return "Already Exists";
79     else {
80         cars.add(car);
81         return "Start practicing";
82     }
83 }
84 public int getWinner(int trackLength) {
85     int maxtime,time;
86     Car maxtimecar;
87     if(cars.size()==0)
88         return -1;
89     else {
90         maxtimecar=cars.get(0);
91         maxtime=maxtimecar.speed*trackLength;
92         for(int i=1;i<cars.size();i++) {
93             Car c=cars.get(i);
94             time=c.speed*trackLength;
95             if(time>maxtime)
96             {
97                 maxtimecar=c;
98                 maxtime=time;
99             }
100         }
101     }
102     return maxtimecar.carId;
103 }
104 }
```


3. Services

Coding

Description

Your task here is to implement a Java code based on the following specifications. Note that your code should match the specifications in a precise manner. Consider default visibility of classes, data fields, and methods unless mentioned otherwise.

Specifications:

```
enum Gender:
    MAN,
    WOMEN (Defined in the stub)
visibility: public

class People
    data members:
        name: String
        age: Integer
        gender: Gender
        visibility: private

    People(String name, Integer age, Gender gender): constructor with public visibility
    Define getter setters with public visibility
    toString() method has been implemented for you

class Implementation:
    method definition:
        fetchPotentialPersonDetails(List<People> list):
            return type: List<People>
            visibility: public

        getNameCount(List<People> list, String name)
            return type: Long
```

potentially working people from the list (i.e., from the age of 18(inclusive) and considering that women retire at 55(exclusive), and a man at 60(exclusive))

- static Long `getNameCount(List<People> list, String name)`: return the count of name from the list

Refer to sample output for more details

Sample Input

```
List<People>list = new ArrayList<>();
    list.add(new People("Scarlet", 30, Gender.WOMEN));
    list.add(new People("David Beckham", 25, Gender.MAN));

-----
list //Input for the first method
list, Scarlet //Input for third method
```

Sample Output

```
[People{name='Scarlet', age=30, gender=WOMEN}, People{name='David Beckham', age=25, gender=MAN}]
-----
1
```

NOTE

You can make suitable function calls and use the RUN CODE button to check your main() method output.

Execution time limit

10 seconds

[REPORT AN ISSUE](#)

```
getNameCount(List<People> list, String name)
    return type: long
    visibility: public
```

Task:

enum Gender: MAN, WOMEN (Present in the code stub)

class People:

- define **data members** according to the above specifications
- define a **constructor** and **getter setters** according to the above specifications
- **toString()** method has been implemented for you as a part of the code stub

class Implementation:

Implement the below method for this class using in Stream API:

- static List<People> fetchPotentialPersonDetails(List<People> list): Fetch the details of potentially working people from the list (i.e., from the age of 18(inclusive) and considering that women retire at 55(exclusive), and a man at 60(exclusive))
- static Long getNameCount(List<People> list, String name): return the count of name from the list

Refer to sample output for more details

Sample Input

```
List<People> list = new ArrayList<>();
    list.add(new People("Scarlet", 30, Gender.WOMEN));
    list.add(new People("David Beckham", 25, Gender.MAN));
    .....
list //Input for the first method
list, Scarlet //Input for third method
```

Sample Output

```
[People{name='Scarlet', age=30, gender=WOMEN}, People{name='David Beckham', age=25,
```

Java 8

UNSOLVED

```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6 import java.util.stream.Collectors;
7
8 enum Gender {
9     MAN, WOMEN
10 }
11
12 class People {
13     //Write Your Code Here..
14     @Override
15     public String toString() {
16         return "People{" +
17             "name='" + name + '\'' +
18             ", age=" + age +
19             ", gender='" + gender +
20             "'";
21     }
22 }
23
24 class Implementation {
25     //Write Your Code Here..
26 }
27
28 public class Source {
29     public static void main(String args[]) throws Exception {
30         /* Enter your code here. Read input from STDIN. Print output to STDOUT */
31     }
32 }
```

Test Results

Custom Input

Description

Sherlock while investigating a murder case staggered upon a letter that had many words whose one character was missing i.e. one character in the word was replaced by an underscore. For eg. " n". He also found thin strips of paper that had a group of words separated by colons, for ex. "run:sun:sn:trun:scope". He figured out that the word whose one character was missing was one of the possible words from the thin strips of paper.

Sherlock finds this job tedious and needs your help. Help Sherlock in identifying the possible words for each incomplete word.

Your task here is to implement a **Java** code based on the following specifications. Note that your code should match the specifications in a precise manner. Consider default visibility of classes, data fields, and methods unless mentioned otherwise.

Specifications:

```

class Definitions:
    class IdentifyWords:
        getPossibleWords(String s1,String s2):
            return type: String
            visibility: public
        
```

Task:

class IdentifyWords:

Implement the below method for this class:

- String getPossibleWords(String s1,String s2):

- Based on the above case study, find all the possible words from s2 that can replace the incomplete word s1, and return the result in the format suggested in the output section

- If none of the words in s2 are possible candidates to replace s1, return "Code_Error"

Note:

Java 8

```

1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  class IdentifyWords {
8      //Write Your Code Here..
9      public String getPossibleWords(String s1, String s2){
10         String possibleWords="";
11         String[] s1values=s1.split("_");
12         String[] s2values=s2.split(":");
13         String value1=s1values[0].toLowerCase();
14         String value2=s2values[0].toLowerCase();
15         for(int index=0; index<s2values.length;index++){
16             if(s2values[index].toLowerCase().contains(value1) && s2values
17             [index].toLowerCase().contains(value2)){
18                 if(s1.length()==s2values[index].length()){
19                     possibleWords=possibleWords+s2values[index].
20                     toUpperCase()+" ";
21                 }
22             }
23         }
24         return possibleWords.substring(0,possibleWords.length()-1);
25     }
26
27     public class Source {
28         public static void main(String args[]) throws Exception {
29             /* Enter your code here. Read input from STDIN. Print output
30             to STDOUT */
31         }
32     }
33 }
        
```

Activate Windows Go to Settings to activate Windows.

Test Results Custom Input RUN CODE SUBMIT

Task:

class IdentifyWords:

Implement the below method for this class:

- String getPossibleWords(String s1,String s2);

- Based on the above case study, find all the possible words from s2 that can replace the incomplete word s1, and return the result in the format suggested in the output section

-If none of the words in s2 are possible candidates to replace s1, return "Code_Error"

Note:

- All words in the output string should be in UPPER_CASE
- All words in the output string should appear in the order in which they appeared in s2
- While searching for s1 in s2, the case of the letters are ignored i.e. "R-n" can match with "run"

Sample Input

```
r_n", "run:sun:rsn:trun:cope
```

Sample Output

```
RUN:RSN
```

NOTE

- You can make suitable function calls and use the RUN CODE button to check your main() method output.

Execution time limit

10 seconds

```

1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 class IdentifyWords {
8     //Write Your Code Here..
9     public String getPossibleWords(String s1, String s2){
10         String possibleWords="";
11         String[] s1values=s1.split("-");
12         String[] s2values=s2.split(":");
13         String value1=s1values[0].toLowerCase();
14         String value2=s2values[1].toLowerCase();
15         for (int index=0; index<s2values.length;index++){
16             if(s2values[index].toLowerCase().contains(value1) && s2values
17                 [index].toLowerCase().contains(value2)){
18                 if(s1.length()==s2values[index].length()){
19                     possibleWords=possibleWords+s2values[index].
20                     toUpperCase()+" ";
21                 }
22             }
23         }
24         return possibleWords.substring(0,possibleWords.length()-1);
25     }
26
27     public class Source {
28         public static void main(String args[] ) throws Exception {
29             /* Enter your code here. Read input from STDIN. Print output
30             to STDOUT */
31         }
32     }
33 }

```

Activate Windows Go to Settings to activate Windows.

Ln 1 Col 1 Java 8

Test Results Custom Input

RUN CODE SUBMIT

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Task

Class Item

- define all the variables according to the above specifications.
- define a constructor with getter and setter according to the above specifications.

Class OneWay

- define all the variables according to the above specifications.
- define a constructor with getter and setter according to the above specifications.

Class Board

- define all the variables according to the above specifications.

Implement the below methods for this class:

-String addItem(OneWay oneway, Item item):

- Write a code that adds the id parameter to the HashMap board on the basis of defined conditions -

1. If the HashMap(board) already contains the OneWay with the same id as of function parameter oneway and OneWay parameter power

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Test Res

```

    int power;
    visibility : private
    Item(int id, int power): constructor with
    define getter and setter with public visib

class OneWay:
    data members:
        int idint power
        visibility : private
    OneWay(int id, int power): constructor
    with public visibility
    define getter and setter with public visibi

class Board:
    data members:
        HashMap<OneWay, ArrayList<Item>> board
        visibility : public
    method definition:
        addItem(OneWay oneWay, Item item):
            return : String
            visibility : public
        hasSpace(int s1, int s2):
            return : boolean
            visibility : public
        getPowerSum(OneWay oneWay):
            return : int
            visibility : public

```

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Test Re

Help

All

Complete the classes using the Specifications given below. Consider default visibility of classes, data fields, and methods unless mentioned otherwise.

Specifications

class definitions:

class Item:

data members:

int id

int power

visibility : private

Item(int id, int power): constructor with
define getter and setter with public visibility

class OneWay:

data members:

int id
int power

visibility : private

OneWay(int id, int power): constructor
with public visibility
define getter and setter with public visibility

class Board:

data members:

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Help

All

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- If it is present in the board then return the sum of the power of the item list corresponds to that oneway.
- If it is not present then return -1.

Sample Input

```
Item item1 = new Item( , );  
OneWay oneWay1 = new OneWay( , );  
Board board = new Board();  
board.addItem(oneWay1, item1)
```

Sample Output

Added

NOTE:

- You can make suitable function calls and use the **RUN CODE** button to check your main() method output.
- All the messages used in the exception handling are case-sensitive.

Execution time limit

10 seconds

[REPORT AN ISSUE](#)

Test R

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and return "Added"

4. If the HashMap(board) does not contains OneWay with the same id as of function parameter oneway and OneWay parameter power is less than the item power then add return "Fail to add".

-String hasSpace(int s1, int s2):

- Write a code that returns true if s1 is less than equal to s2 otherwise return false.

-int getPowerSum(OneWay oneway):

- Write a code that check if the oneway is present in the HashMap(board) or not.
- If it is present in the board then return the sum of the power of the item list corresponds to that oneway.
- If it is not present than return -1.

Sample Input

```
Item item1 = new Item(1,10);
OneWay oneWay1 = new OneWay(1,100);
Board board = new Board();
board.addItem(oneWay1,item1)
```

Sample Output

Test Res

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String addEntity(OneWay oneway, Item item)

- Write a code that adds the send parameter to the HashMap board on the basis of defined conditions -
1. If the HashMap(board) already contains the OneWay with the same id as of function parameter oneway and OneWay parameter power is greater than or equal to the item power then add the item in the ArrayList at the same key and update the oneway power with $\text{oneway}(\text{power}) - \text{item}(\text{power})$ and return "Added".
 2. If the HashMap(board) already contains the OneWay with the same id as of function parameter oneway and OneWay parameter power is less than the item power then return "Fail to add".
 3. If the HashMap(board) does not contains OneWay with the same id as of function parameter oneway and OneWay parameter power is greater than or equal to the item power then add then add new entity in the HashMap(board) and update the oneway power with $\text{oneway}(\text{power}) - \text{item}(\text{power})$ and return "Added"
 4. If the HashMap(board) does not contains OneWay with the same id as of function parameter oneway

Java 8

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Test Res

```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 class Item{
8     |...//Define all data members and methods here
9 }
10
11 class OneWay{
12     |...//Define all data members and methods here
13 }
14
15 class Board{
16     |...//Define all data members and methods here
17 }
18
19
20 //Class name should be "Source",
21 //otherwise solution won't be accepted
22 public class Source {
23     | public static void main(String args[]) throws Exception {
24     |     | /* Enter your code here. Read input from STDIN. Print output
25     |     | */
26     | }
```

Test Results

Custom Input



Bulb Question

```
import java.util.*;
import java.util.stream.Collectors;

class Item {
    private int id;
    private int power;

    public Item(int id, int power) {
        this.id = id;
        this.power = power;
    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public int getPower() {
        return power;
    }

    public void setPower(int power) {
        this.power = power;
    }
}
```

```
}
```

```
class OneWay {
```

```
    private int id;
```

```
    private int power;
```

```
    public OneWay(int id, int power) {
```

```
        super();
```

```
        this.id = id;
```

```
        this.power = power;
```

```
    }
```

```
    public int getId() {
```

```
        return id;
```

```
    }
```

```
    public void setId(int id) {
```

```
        this.id = id;
```

```
    }
```

```
    public int getPower() {
```

```
        return power;
```

```
    }
```

```
    public void setPower(int power) {
```

```
        this.power = power;
```

```
    }
```

```
}
```



```

class Board {

    public HashMap<OneWay, ArrayList<Item>> board = new HashMap<OneWay,
ArrayList<Item>>>();

    public ArrayList<Item> it = new ArrayList<Item>();

    public String addItem(OneWay oneWay, Item item) {
        if (board.containsKey(oneWay)) {
            if (oneWay.getId() == item.getId() && oneWay.getPower() >= item.getPower()) {
                return "Added";
            } else if (oneWay.getId() == item.getId() && oneWay.getPower() <
item.getPower()) {
                return "Fail to add";
            } else if (oneWay.getId() != item.getId() && oneWay.getPower() >=
item.getPower()) {
                oneWay.setPower(oneWay.getPower() - item.getPower());
                it.add(item);
                board.put(oneWay, it);
                return "Added";
            } else
                return "Fail to Add";
        } else
            return "Fail to add";
    }

    public Boolean hasSpace(int s1, int s2) {
        if (s1 <= s2)
            return true;
        else
            return false;
    }
}

```

```
}
```

```
public int getPowerSum(OneWay oneWay) {  
    int sum=0;  
    if (board.containsKey(oneWay))  
    {  
        for(Item i : board.get(oneWay))  
        {  
            sum+=i.getPower();  
        }  
        return sum;  
    }  
    else  
        return -1;  
}
```

```
}
```

```
class Source
```

```
{  
    public static void main(String args[])  
    {  
        Item item1 = new Item(1, 10);  
        OneWay oneWay1 = new OneWay(1, 100);  
        Board board = new Board();  
        board.addItem(oneWay1, item1);  
    }  
}
```

6.

2. Speedometer

■ Coding

Description

The RTO has designed a video game for children to bring in awareness regarding road safety.

Help them by writing a Java program to check the functionality of the game software. If the input speed is between 10 and 200 then return the message "Valid Speed" else program should alert with the message "Error in Speedometer" by throwing a user defined exception SpeedometerException.

```
class definitions:
class Speed:
    data field:
        speed: String

class SpeedImplementation:
    method definitions:
        setSpeed(Speed s, int speedValue):
            visibility: public
            return type: String

class SpeedometerException extends Exception:
    method definitions:
        SpeedometerException(String s): Constructor
        visibility: public
```

TASKS:

class Speed

- define the String variable speed

class SpeedImplementation

-Implement the below method for this class:

String setSpeed(Speed s, int speedValue);

- Inside this method, you need to write logic for validating the speedValue.
- If the speedValue is less than 10 or greater than 200, this method should throw a SpeedInvalidException with message "Error in Speedometer" else assign the string "Valid Speed" to s.speed
- catch the thrown exception and assign the string "Invalid Speed" to s.speed


```

    def speed = 0
    def speedValue
    def speedValue
    def speedValue

class SpeedometerException extends Exception {
    method definitions
    SpeedometerException(String s): Constructor
    visibility: public

```

TASKS:

class Speed

- define the String variable speed

class SpeedImplementation

- Implement the below method for this class:

String setSpeed(Speed s, int speedValue):

- Inside this method, you need to write logic for validating the speedValue.
- If the speedValue is less than 10 or greater than 200, this method should throw a SpeedInvalidException with message "Error in Speedometer" else assign the string "Valid Speed" to s.speed
- catch the thrown exception and assign the string "Invalid Speed" to s.speed
- return default message if an exception is thrown, else return s.speed

class SpeedometerException

- define custom exception class SpeedometerException by extending the Exception class.
- define a parameterized constructor with a String argument to pass the message to the super class.

Sample Input

```

Speed s = new Speed();
setSpeed(s, 4)

```

Sample Output

```
Error in Speedometer
```

NOTE

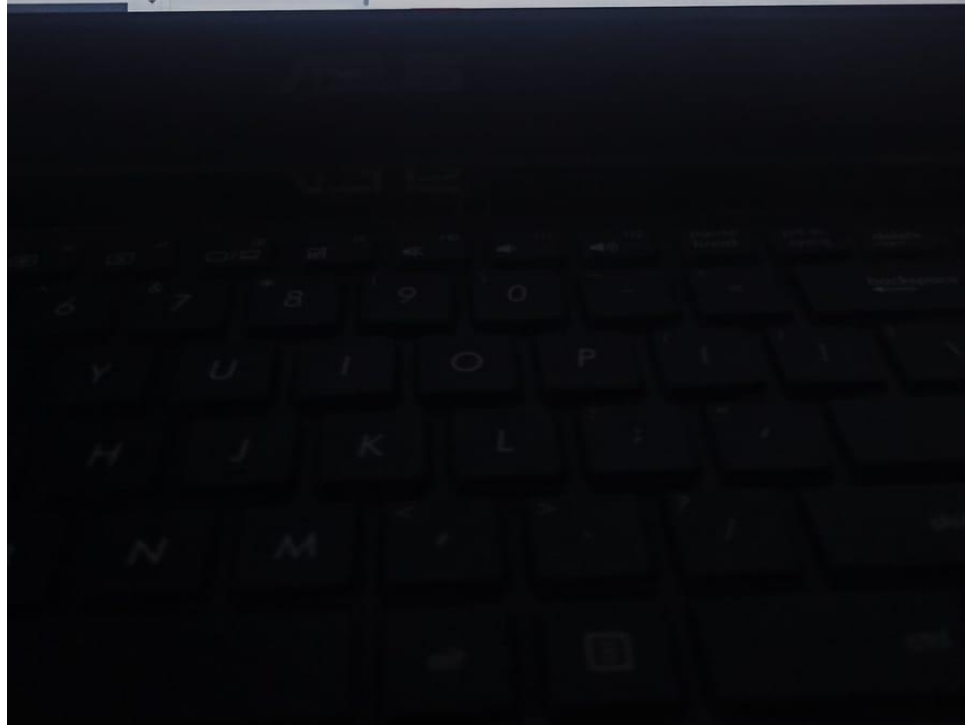
Java 8

PARTIALLY ACCEPTED

```
4 import java.math.*;
5 import java.util.regex.*;
6
7 class Speed{
8     //Write Your Code Here..
9     String speed;
10    public String speed(String speed){
11        this.speed=speed;
12    }
13 }
14
15
16 class SpeedImplementation{
17     //Write Your Code Here..
18     public String setSpeed(Speed s,int speedValue){
19         try{
20             if(speedValue<10 || speedValue>200){
21                 throw new SpeedInvalidException("Error in Speedometer");
22             }
23             else{
24                 s.speed="Valid Speed";
25             }
26         }
27         catch(SpeedometerException h){
28             s.speed="Invalid Speed";
29         }
30         catch(speedInvalidException e){
31             return "Error in Speedometer";
32         }
33         return s.speed;
34     }
35 }
36
37
38 class SpeedometerException extends Exception {
39     //Write Your Code Here..
40     String h;
41     public SpeedometerException(String h){
42         super(h);
43         this.h=h;
44     }
45 }
```

Test Results Custom Input

RUN CODE



Java 8

PARTIALLY ACCEPTED

```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 class Speed{
8     //Write Your Code Here..
9     //data field;
10    String speed;
11
12 }
13
14 class SpeedImplementation{
15     //Write Your Code Here..
16     public String setSpeed(Speed s,int speedValue)throws SpeedometerException{
17         try{
18             if(speedValue<10 || speedValue>200){
19                 throw new SpeedometerException("Error in Speedometer");
20             }
21             else{
22                 s.speed= "Valid Speed";
23             }
24         }
25         catch(SpeedometerException e){
26             s.speed= "Invalid Speed";
27         }
28         return s.speed;
29     }
30 }
31
32
33 class SpeedometerException extends Exception {
34     //Write Your Code Here..
35     String h;
36     public SpeedometerException(String h){
37         super(h);
38         this.h=h;
39     }
40 }
41
42 public class Source {
```

Test Results

Custom Input

```
17     try{
18         if(speedValue<10 || speedValue>200){
19             throw new SpeedometerException("Error in Speedometer");
20         }
21         else{
22             s.speed="Valid Speed";
23         }
24     }
25     catch(SpeedometerException e){
26         s.speed="Invalid Speed";
27     }
28     return s.speed;
29 }
30 }
31
32 class SpeedometerException extends Exception {
33     //Write Your Code Here.
34     String h;
35     public SpeedometerException(String h){
36         super(h);
37         this.h=h;
38     }
39 }
40
41
42 public class Source {
43     public static void main(String args[]) throws Exception {
44         /* Enter your code here. Read input from STDIN. Print output to STDOUT */
45     }
46 }
```

Test Results

Custom Input

RUN CODE

the


```

6
7 class Speed{
8     //Write Your Code Here..
9     //data field;
10    String speed;
11
12 }
13
14 class SpeedImplementation{
15     //Write Your Code Here..
16     public String setSpeed(Speed s,int speedValue) throws SpeedometerException{
17         try{
18             if(speedValue<10 || speedValue>200){
19                 throw new SpeedometerException("Error in Speedometer");
20             }
21             else{
22                 s.speed= "Valid Speed";
23             }
24         }
25         catch(SpeedometerException e){
26             s.speed= "Invalid Speed";
27         }
28         return s.speed;
29     }
30 }
31
32
33 class SpeedometerException extends Exception {
34     //Write Your Code Here..
35     String h;
36     public SpeedometerException(String h){
37         super(h);
38         this.h=h;
39     }
40 }
41
42 public class Source {
43     public static void main(String args[] ) throws Exception {
44         /* Enter your code here. Read input from STDIN. Print output to STDOUT */
45     }
46 }

```

Test Results Custom Input

```
import java.util.*;
```

```
class Speed {
```

```
    String speed;
```

```
}
```

```
class SpeedInvalidException extends Exception {
```

```
    public SpeedInvalidException(String message) {
```

```
        super(message);
```

```
    }
```

```
}
```

```
class SpeedometerException extends Exception {
```

```
    public SpeedometerException(String message) {
```

```
        super(message);
```

```
    }
```

```
}
```

```
class SpeedImplementation {
```

```
    String speed;
```

```
    public String setSpeed(Speed s, int speedValue)
```

```
{
```

```

        try {
            if (speedValue < 10 || speedValue > 200)
            {
                throw new SpeedInvalidException("Error in Speedometer");
            }
            else {
                speed = "valid speed";
            }
        }
        catch (SpeedInvalidException e)
        {
            s.speed = "Invalid Speed";
            System.out.println(e);
            return s.speed;
        }
        return s.speed;
    }

    public static void main(String[] args) {
        Speed s = new Speed();
        SpeedImplementation obj = new SpeedImplementation();
        obj.setSpeed(s,4);
    }
}

```

7.

3h 59m
left

Help

All

1

Task

2

Class Car

3

- define the String variable model.
- define the String variable company.

4

- define the float variable price.
- define a constructor and getter setters according to the above specifications.

Class Showroom

- define the object of `ArrayList<Car>` variable `carList`.

Implement the below methods for this class:

-`ArrayList<String>` `uniqueCompany()`:

- Write a code to find out all the unique car company's name.
- Create an `ArrayList` of `String` which contains all the unique car company name in ascending order and return the

```
class Showroom:
    data member:
        ArrayList<Car> carList = new ArrayList<>()

    method definitions:
        uniqueCompany():
            return type: ArrayList<String>

        averageByCompany(String company):
            return type: float
```

Java 8

```
1  in
2  in
3  in
4  in
5  im
6
7  cl
8
9  }
10
11 cl
12
13 }
14
15 put
16
17
18 STDOL
19 }
```

Test Results



3h 58m
left

Help

All

1

2

3

4

- define the **float** variable **price**.

-define a **constructor** and **getter setters** according to the above specifications.

Class Showroom

- define the object of **ArrayList<Car>** variable **carList**.

Implement the below methods for this class:

-ArrayList<String> uniqueCompany():

- Write a code to find out all the unique car company's name.
- Create an ArrayList of String which contains all the unique car company name in ascending order and return the ArrayList of String.

Refer to the below example for a clear understanding

Example:

carList = {["Swift Dzire", "Maruti", 200000.0],["Swift", "Maruti", 180000.0],["Xuv500", "Mahindra", 1000000.0]}

- return the list ["Mahindra", "Maruti"]

-float averageByCompany(String company):

- Write a code to find out the average price of a given car company.
- Return the average, $\text{average} = (A_1 + A_2 + \dots + A_n)/n$.

Refer to the below example for a clear understanding

Java 8

```
1  import
2  import
3  import
4  import
5  import
6
7  class
8  {
9  }
10
11 class
12 {
13 }
14
15 public
16 public
17
18 }
19 }
```

STDOUT

Test Results

3h 58m
left

Help

All

1

2

3

4

- Return the average, $\text{average} = (A_1 + A_2 + \dots + A_n)/n$.

Refer to the below example for a clear understanding

Example:

`carList = [{"Swift Dzire", "Maruti", 200000.0}, {"Swift", "Maruti", 180000.0}, {"Xuv500", "Mahindra", 1000000.0}]` and `company = "Maruti"`

`average = (200000.0+180000.0)/2 = 190000.0`, return 190000.0

Sample Input

```
Showroom obj = new Showroom();
obj.carList.add(new Car("Swift Dzire", "Maruti", 200000.0));
obj.carList.add(new Car("Swift", "Maruti", 180000.0));
obj.carList.add(new Car("Xuv500", "Mahindra", 1000000.0));
-----
obj.uniqueCompany();
obj.averageByCompany("Maruti");
```

Sample Output

```
[Mahindra, Maruti]
190000.0
```

NOTE:

- You can make suitable function calls and use the **RUN CODE** button to check your `main()` method output

Java 8

```
1  import
2  import
3  import
4  import
5  import
6
7  class
8  ...
9  }
10
11 class
12 ...
13 }
14
15 publi
16 pub
17
18
19
STDOUT
18 }
19 }
```

Test Results



3h 58m
left

Help

All

1

2

3

4

```
ShowRoom obj = new ShowRoom();  
obj.carList.add(new Car("Swift Dzire", "Maruti", 200000));  
obj.carList.add(new Car("Swift", "Maruti", 180000.0));  
obj.carList.add(new Car("Xuv500", "Mahindra", 100000));  
-----  
obj.uniqueCompany();  
obj.averageByCompany("Maruti");
```

Sample Output

```
[Mahindra, Maruti]  
190000.0
```

NOTE:

- You can make suitable function calls and use the **RUN CODE** button to check your **main()** method output.

Execution time limit

10 seconds

[REPORT AN ISSUE](#)

Java 8

```
1 import  
2 import  
3 import  
4 import  
5 import  
6  
7 class  
8  
9 }  
10  
11 class  
12  
13 }  
14  
15 public  
16 public  
17  
18  
19  
STDOUT *  
18 }  
19 }
```

Test Results

hp



3h 59m
left

Help

All

1

2

3

4

1. Car Management System

Coding

Description

Complete the classes using the Specifications given below.
Consider default visibility of classes, data fields, and methods unless mentioned otherwise.

Specifications

```
class definitions:
class Car:
    data members:
        String model
        String company
        float price
        visibility: private
    Car(String model, String company, float price):
        Define getter setters with public visibility

class Showroom:
    data member:
        ArrayList<Car> carList = new ArrayList<>()

    method definitions:
        uniqueCompany():
            return type: ArrayList<String>
```

Java 8

1

2

3

4

5

6

7

8

9

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18

19

Test Re