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Reg-FA24-BSE-099
Task-Lab Task#4
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Q1 Book

Coding > Java_Practice > Book.java > Book > get()

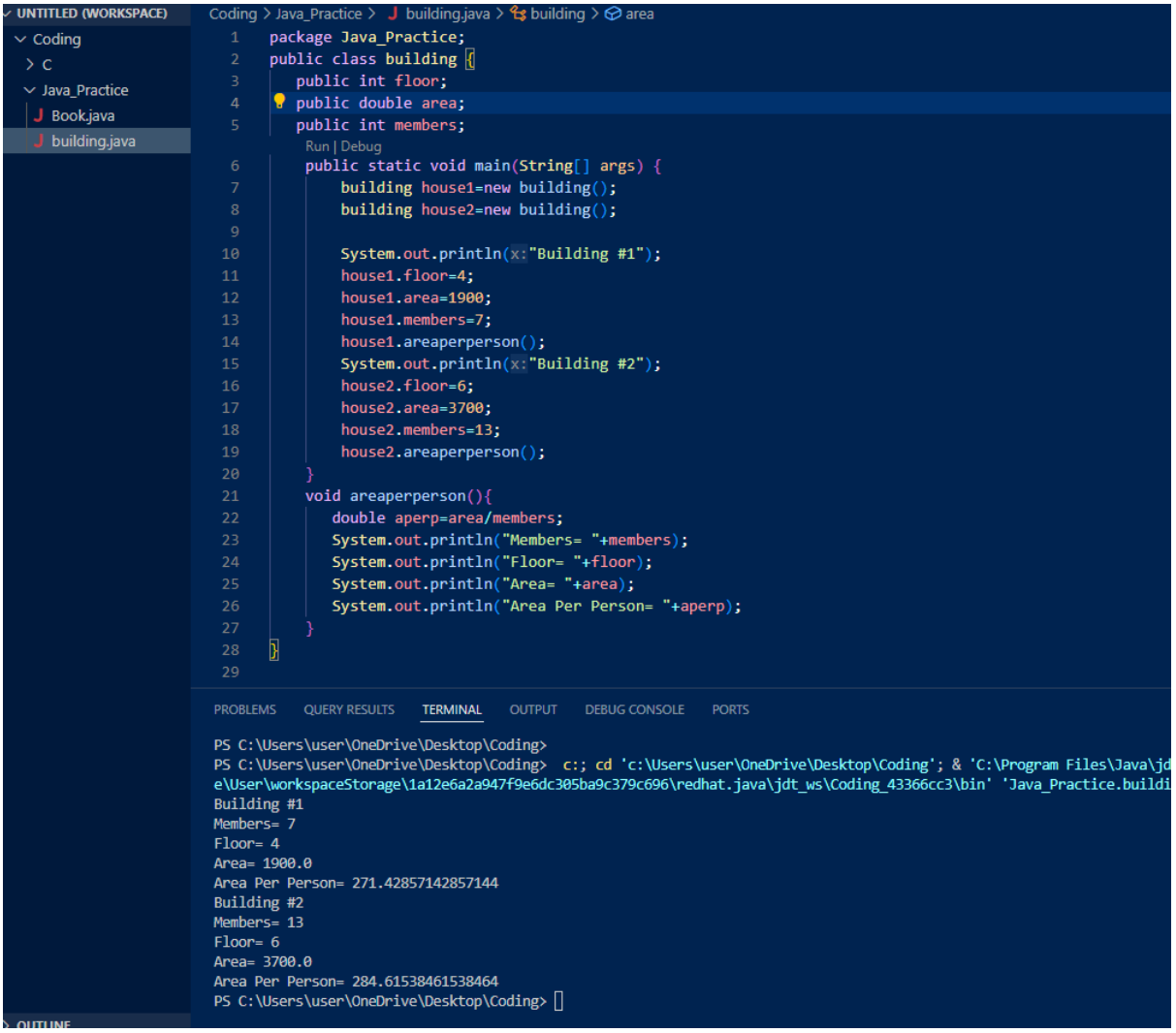
```java
package Java_Practice;
import java.util.Scanner;
public class Book{
    private String book_id;
    private int pages;
    private double price;

    Run | Debug
    public static void main(String[] args) {
        Scanner z=new Scanner(System.in);
     Book obj=new Book();
     while(true){
     System.out.println(x:"Book Simulator");
     System.out.println(x:"1-Input Values");
     System.out.println(x:"2-Show Values");
     System.out.println(x:"3-Set Values");
     System.out.println(x:"4-Get Price");
     System.out.println(x:"5-Exit");

     int opt=z.nextInt();
     if(opt==1){
       obj.get();
     }
     else if(opt==2){
       obj.show();
     }
     else if(opt==3){
       obj.set(id:"CSC101",page:299,price1:288);
     }
     else if(opt==4){
       System.out.println("Price= "+obj.getprice());
     }
     else if(opt==5){
       break;
     }
    }
    }
    public void get(){
     Scanner x=new Scanner (System.in);
     System.out.println(x:"Enter Book ID");
     book_id=x.nextLine();
     System.out.println(x:"Enter Pages");
     pages=x.nextInt();
     System.out.println(x:"Enter Price");
     price=x.nextDouble();
```

```
46      }
47      public void show(){
48        System.out.println("Book Id = "+book_id);
49        System.out.println("Pages ="+pages);
50        System.out.println("Price = "+price);
51      }
52      public void set(String id,int page,double price1){
53          book_id=id;
54          pages=page;
55          price=price1;
56      }
57      public double getprice(){
58          return price;
59      }
60
61  }
62
63
64
```

PROBLEMS QUERY RESULTS TERMINAL OUTPUT DEBUG CONSOLE PORTS

```
3-Set Values
4-Get Price
5-Exit
1
Enter Book ID
CSC102
Enter Pages
238
Enter Price
999
Book Simulator
1-Input Values
2-Show Values
3-Set Values
4-Get Price
5-Exit
2
Book Id = CSC102
Pages =238
Price = 999.0
```

Q2-Building


UNTITLED (WORKSPACE)
Coding
C
Java_Practice
Book.java
building.java
Coding > Java_Practice > building.java > building > area
package Java_Practice;
public class building {
public int floor;
public double area;
public int members;
Run | Debug
public static void main(String[] args) {
building house1=new building();
building house2=new building();
System.out.println(x:"Building #1");
house1.floor=4;
house1.area=1900;
house1.members=7;
house1.areaperperson();
System.out.println(x:"Building #2");
house2.floor=6;
house2.area=3700;
house2.members=13;
house2.areaperperson();
}
void areaperperson(){
double aperp=area/members;
System.out.println("Members= "+members);
System.out.println("Floor= "+floor);
System.out.println("Area= "+area);
System.out.println("Area Per Person= "+aperp);
}
}
PROBLEMS
QUERY RESULTS
TERMINAL
OUTPUT
DEBUG CONSOLE
PORTS
PS C:\Users\user\OneDrive\Desktop\Coding>
PS C:\Users\user\OneDrive\Desktop\Coding> c:; cd 'c:\Users\user\OneDrive\Desktop\Coding'; & 'C:\Program Files\Java\jd
e\User\workspaceStorage\1a12e6a2a947f9e6dc305ba9c379c696\redhat.java\jdt_ws\Coding_43366cc3\bin' 'Java_Practice.buildi
Building #1
Members= 7
Floor= 4
Area= 1900.0
Area Per Person= 271.42857142857144
Building #2
Members= 13
Floor= 6
Area= 3700.0
Area Per Person= 284.61538461538464
PS C:\Users\user\OneDrive\Desktop\Coding>

Q3-Result

```java
package Java_Practice;
import java.util.Scanner;
public class Result {
    private String rollnumber;
    private String name;
    private int[] marks=new int[3];;
     Run | Debug
    public static void main(String[] args) {
        Result mainobj=new Result();
        Scanner x=new Scanner (System.in);
        while (true){
            System.out.println(x:"1-Enter Details");
            System.out.println(x:"2-View Details");
            int opt=x.nextInt();
            if(opt==1){
            mainobj.input();
            }
            else if(opt==2){
            mainobj.show();
            }
        }
    }
    void input(){
        Scanner sc=new Scanner (System.in);
        System.out.println(x:"Enter Roll Number ");
        rollnumber = sc.nextLine();
        System.out.print(s:"Enter Name: ");
        name = sc.nextLine();
        for(int i=0;i<3;i++){
        System.out.println("Enter Marks For Subject "+(i+1));
        marks[i]=sc.nextInt();
        }

    }
    void show(){

    System.out.println("Name - "+name);
    System.out.println("Roll Number- "+rollnumber);
    System.out.println("Subject 1 Marks= "+marks[0]);
    System.out.println("Subject 2 Marks= "+marks[1]);
    System.out.println("Subject 3 Marks= "+marks[2]);
    System.out.println("Average Marks= "+total());
    System.out.println("Average Marks"+average());

```

```
45      int total(){
46          int sum=0;
47       for(int j=0;j<3;j++){
48          sum+=marks[j];
49         }
50         return sum;
51
52      }
53      double average(){
54         return (total()/3);
55      }
56  }
57
```

PROBLEMS QUERY RESULTS TERMINAL OUTPUT DEBUG CONSOLE PORTS

```
PS C:\Users\user\OneDrive\Desktop\Coding>  & 'C:\Program Files\Java\jdk-24\bin\java
c379c696\redhat.java\jdt_ws\Coding_43366cc3\bin' 'Java_Practice.Result'
1-Enter Details
2-View Details
1
Enter Roll Number
FA24-BSE-099
Enter Name: Ahmed Zia
Enter Marks For Subject 1
89
Enter Marks For Subject 2
76
Enter Marks For Subject 3
95
1-Enter Details
2-View Details
2
Name - Ahmed Zia
Roll Number- FA24-BSE-099
Subject 1 Marks= 89
Subject 2 Marks= 76
Subject 3 Marks= 95
Average Marks= 260
Average Marks86.0
1-Enter Details
2-View Details
```

Q4-Rectangle

```java
package Java_Practice;

public class Rectangle {
    private float length=1;
    private float width=1;
    Rectangle (float leng,float widt){
     length=leng;
     width=widt;
    }
    Rectangle(){
    length=1;
    width=1;
}
    Run | Debug
    public static void main(String[] args) {
        Rectangle obj1=new Rectangle();
        Rectangle obj2=new Rectangle(leng:5,widt:9);
        Rectangle obj3=new Rectangle(leng:4,widt:6);
        System.out.println(x:"Default Rectangle #1");
        System.out.println(obj1.getlength());
        System.out.println(obj1.getwidth());
        obj1.area();
        obj1.perimeter();

        System.out.println(x:"Rectangle #2");
        System.out.println(obj2.getlength());
        System.out.println(obj2.getwidth());
        obj2.area();
        obj2.perimeter();
        System.out.println(x:"Rectangle #3");
        System.out.println(obj3.getlength());
        System.out.println(obj3.getwidth());
        obj3.area();
        obj3.perimeter();
    }
    void area(){
        float area=length*width;
        System.out.println("Area= "+area);
    }
```

```java
public class Rectangle {
    void perimeter(){
        float perimeter=2*(length+width);
        System.out.println("Perimeter= "+perimeter);
    }
    public float getlength(){
     return length;
    }
    public float getwidth(){
     return width;
    }
    public void set(float len,float wid){
        if(len<=0.0 || len>=20.0){
            len=1;
            wid=1;
        }
    }
}
```

Output (Ctrl+Shift+U)

PROBLEMS QUERY RESULTS TERMINAL OUTPUT DEBUG CONSOLE PORTS

```
PS C:\Users\user\OneDrive\Desktop\Coding>  & 'C:\Program Files\Java\jdk-24\bin\java.exe' '--
user\AppData\Roaming\Code\User\workspaceStorage\1a12e6a2a947f9e6dc305ba9c379c696\redhat.java
Default Rectangle #1
1.0
1.0
Area= 1.0
Perimeter= 4.0
Rectangle #2
5.0
9.0
Area= 45.0
Perimeter= 28.0
Rectangle #3
4.0
6.0
Area= 24.0
Perimeter= 20.0
PS C:\Users\user\OneDrive\Desktop\Coding>
```

Q5-CAR

car.java

Source | History

```java
package com.mycompany.ailines;
public class car {
     private String name;
    private char direction;
    private int position;
    car(String x,char y,int z){
         this.name=x;
         this.direction=y;
         this.position=z;
    }
    public static void main(String[] args) {
        car obj=new car("Challenger",'N',0);
        obj.display();
        obj.turn();
        obj.display();
        obj.turn('N');
        obj.display();
        obj.move(50);
        obj.display();
    }
    public void turn() {
        switch (direction) {
            case 'E':
            direction = 'S';
            break;
            case 'S':
            direction = 'W';
            break;
            case 'W':
            direction = 'N';
            break;
            case 'N':
            direction = 'E';
            break;
        }
    }
```

Output - Run (car) | car - Navigator

```
WARNING: Please consider reporting this to the maintainers of class com.google.inject.internal.aop
WARNING: sun.misc.Unsafe::staticFieldBase will be removed in a future release
Scanning for projects...

----------------------< com.mycompany:Ailines >-----------------------
Building Ailines 1.0-SNAPSHOT
  from pom.xml
--------------------------------[ jar ]---------------------------------

--- resources:3.3.1:resources (default-resources) @ Ailines ---
skip non existing resourceDirectory C:\Users\user\OneDrive\Documents\NetBeansProjects\Ailines\src\

--- compiler:3.13.0:compile (default-compile) @ Ailines ---
Nothing to compile - all classes are up to date.

--- exec:3.1.0:exec (default-cli) @ Ailines ---
Car: Challenger
Direction: N
Position: 0
----------------------
Car: Challenger
Direction: E
Position: 0
----------------------
Car: Challenger
Direction: N
Position: 0
```

```java
    public void turn(char newDirection) {
        if (newDirection == 'E' || newDirection == 'W' ||
            newDirection == 'N' || newDirection == 'S') {
            direction = newDirection;
        } else {
            System.out.println("Invalid direction! Use E, W, N, or S");
        }
    }
    public void move(int distance) {
        position += distance;
    }
    public void display() {
        System.out.println("Car: " + name);
        System.out.println("Direction: " + direction);
        System.out.println("Position: " + position);
        System.out.println("----------------------");
    }
}
```