

Object Oriented Programming (SWE-103) Lab Exam

Question 7(Compulsory):

Write a program that prompts the user to enter the length in feet and inches and outputs the equivalent length in inches and in centimeters. If the user enters a negative number or a nondigit number, throw and handle an appropriate exception and display the message

Source Code:

```
import java.util.InputMismatchException;
import java.util.Scanner;

public class Question_7 {
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        System.out.println("\tHeight Converter:");
        System.out.println("Instruction:");
        System.out.println("First enter height in foot then
enter height in inches.\n");
        try{
            System.out.print("Enter Height in Foot:");
            int foot = input.nextInt();
            System.out.print("Enter height in Inches: ");
            int inch = input.nextInt();
            double convert = foot*30.48;
            double convert2 = inch*2.54;
            double ans = convert+convert2;
            System.out.println(foot+" Foot & "+inch+" inches =
"+ans+" cm");
        }catch(InputMismatchException e){
            System.out.println("Please enter Integers !");
        }catch (Exception e){
            System.out.println(e);
        }
    }
}
```

Question 6:

Object Oriented Programming (SWE-103) Lab

Exam

Create an abstract Auto class with fields for the car make and price. Include get and set methods for these fields; the setPrice() method is abstract. Create two subclasses for individual automobile makers (for example, Ford or Chevy), and include appropriate setPrice() methods in each subclass (for example, \$20,000 or \$22,000). Finally, write an application that uses the Auto class and subclasses to display information about different cars.

Source Code:

Auto Class

```
public abstract class Auto {  
  
    private String make;  
    protected double price;  
  
    // Constructor  
    public Auto(String m)  
    {  
        make = m;  
    }  
    // Get Methods  
    public String getMake()  
    {  
        return make;  
    }  
    public double getPrice()  
    {  
        return price;  
    }  
    // Set Methods  
    public void setMake(String mke)  
    {  
        make = mke;  
    }  
    public void setprice(double pri)  
    {  
        price = pri;  
    }  
    public abstract void setPrice();  
}
```

Object Oriented Programming (SWE-103) Lab

Exam

Ford Class:

```
public class Ford extends Auto {  
  
    public Ford(String make) {  
        this.make=make;  
    }  
  
    public void setPrice() {  
        price = 20000;  
    }  
  
}
```

Chevy Class

```
public class Chevy extends Auto {  
  
    public Chevy(String make) {  
        this.make=make;  
    }  
  
    public void setPrice() {  
        price = 22000;  
    }  
  
}
```

Main Method:

```
class LabExam {  
    public static void main (String[] arg) {  
        Ford car1 = new Ford ("Ford");  
        Chevy car2 = new Chevy ("Chevy");  
  
        System.out.println("Ford Automobile");  
        System.out.println("-----");  
  
        System.out.println(car1.getMake());  
        car1.setPrice();  
        System.out.println(car1.getPrice());  
        System.out.println("Chevy Automobile");  
        System.out.println("-----");  
        System.out.println(car2.getMake());  
        car1.setPrice();  
    }  
}
```

Object Oriented Programming (SWE-103) Lab

Exam

```
System.out.println(car2.getPrice());  
    }  
}
```