**Assignment\_03:** This is 5% of your over all marks. Submit it by the deadline. If not submitted by deadline then 5% for each business days will be deducted. After 5 business days , Marks 0 will be awarded.

UPLOAD only .java files

Question:

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Body Mass Index(BMI ) is a measure of health on weight. It can be calculated by taking your weight in kilogram and dividing by the square of your height in meters. Write a program that prompts the user to enter a weight in pounds and height in inches and displays **the BMI categories**

**INSTRUCTIONS : Make sure you follow all the instructions**

1. This program will be written using concepts of object , classes, constructors and method over loading .

**Instruction for class BMIclass**

1. Create a class BMI:
   1. it will have 2 class variables height and inches
   2. This class will have 2 constructor

default constructor –no parameter constructor

constructor with 2 parameters height and width

1. Create below 4 methods : Do NOT use static methods
   1. ConvertPoundsToKG(double weightInPounds): This method will have 1 parameter ,datatype will be double. Also Method return type will be double. In the method body you will convert pound to KG .Note: one pound is 0.453 Kilograms
   2. ConvertInchesToMeters(double heightInMeters): : This method will have 1 parameter ,datatype will be double. Also Method return type will be double. In the method body you will convert inches to Meters .Note: one inch is 0.0254 meters .
   3. Calculate BMI(double weightInPounds, double heightInMeters) and return Type will be double : This method will have 2 parameters : pound in double and inches in double. Now call ConvertPoundsToKG and ConvertInchesToMeters. Once you get KG and Meters now apply the formula of BMI and calculate BMI
   4. showResult(double BMI) : This method will have double parameter BMI .
      1. apply below if and else

**BMI Categories:**   
if BMI is <18.5 then print Underweight   
if BMI is >=18.5 and <=24.9 then print Normal weight  
if BMI is >=25 and <= 29.9 then print overweight  
BMI is >= 30 or greater then print Obesity

1. **Create class TestBMI:**
   1. Create 1st object using default constructor
   2. Now ask user to enter weight in pounds and height in inches
   3. Create 2nd object(let’s give name as b2) using parameterized constructor using the user’s input of pounds and height
   4. Call calculateBMI method for object b2.store the BMI which you get it from this method in a variable(double calculatedBMI)
   5. Now call showResult method .Pass the calculateBMI variable)

**RUBRIC:**

**1 marks : Put comments regarding the program at the top and also put your name as author . Also**

**1marks: Properly structured program : You should have proper indentation . :.It should have proper indentation with braces also. Your program should also follow naming standards for classes, variables and methods**

**2 marks: All the instructions should be followed( regarding arrays and calculation).**

**1 mark : Over all quality of the program: If you meet all above criteria ,then you earn this 1 mark.**