

Birla Institute of Technology & Science, Pilani, K. K. BIRLA Goa Campus
Computer Programming (CS F111)
Second Semester 2013-2014
Lab-5 (C Programming)

Question #1

Write a Program which does the following:

Take Age, Gender, Weight [in pounds] and Height [in inches] from user. Calculate the **BMI** and **BMR** of the user as per the following formulas.

BMI = (Weight/(Height x Height)) x 703

BMR for Women: $655 + (4.35 \times \text{Weight}) + (4.7 \times \text{Height}) - (4.7 \times \text{Age})$

BMR for Men: $66 + (6.23 \times \text{Weight}) + (12.7 \times \text{Height}) - (6.8 \times \text{Age})$

Display the current status of obesity of the user by the data in the below table:

BMI Range	Obesity status
18.5 or less	Underweight
18.5 to 24.99	Normal Weight
25 to 29.99	Overweight
30 to 34.99	Obesity (Class 1)
35 to 39.99	Obesity (Class 2)
40 or greater	Morbid Obesity

Take input from the user about his/her exercise nature in the following way:

1 for Sedentary, 2 for Lightly Active, 3 for Moderately Active

4 for Very Active and 5 for Extra Active

Calculate the total daily Caloric needs of the person according to the table and print it on the screen.

Activity Factor	Calorie-calculation
Sedentary	BMR x 1.2
Lightly Active	BMR x 1.375
Moderately Active	BMR x 1.55
Very Active	BMR x 1.725
Extra Active	BMR x 1.9

Sample Input:

Enter your weight in pounds,height in inches,age

198 70 24

Enter your Gender:M for male and F for female

M

Select your exercise nature: ,

1 for Sedentary, 2 for Lightly Active, 3 for Moderately Active

4 for Very Active and 5 for Extra Active

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Output:

Your BMI = 28.406939
Your BMR = 2025.339966
Your Status: Over Weight!
Your daily Calorie need: 2784.842529

Sample Input:

Enter your weight in pounds,height in inches,age
198 70 24
Enter your Gender:M for male and F for female
T

Output:

Invalid choice.

Sample Input:

Enter your weight in pounds,height in inches,age
110 65 23
Enter your Gender:M for male and F for female
F
Select your exercise nature:.,
1 for Sedentary, 2 for Lightly Active, 3 for Moderately Active
4 for Very Active and 5 for Extra Active
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Output:

Your BMI = 18.302958
Your BMR = 1330.900024
Your Status: UnderWeight!!
Your daily Calorie need: 2062.895020

Question #2

Write a Program to find whether the entered number is a palindrome number. A **Palindrome** number is the one which remains the same after reversing the digits (**Eg.12521**). Take a 5 digit number (Between 10000 and 99999) as input from the user. Check if the number is in the specified range. Output whether the given number is a Palindrome number.

Sample Input:

12345

Output:

Given Number 12345 is not a Palindrome

Sample Input:

45654

Output:

Given Number 45654 is a Palindrome

Sample Input:

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Output:

Error in range of number,exiting...