

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

A school conducts a 100 mark Scholarship exam for its student:

Grade:

Grade A: Marks ≥ 75

Grade B: $75 > \text{Marks} \geq 60$

Grade C: $60 > \text{Marks} \geq 50$

Grade D: $50 > \text{Marks} \geq 40$

Grade E: Marks < 40

Scholarships: (% of fees)

80%: Marks ≥ 95

50%: $95 > \text{Marks} \geq 80$

10%: Marks < 80

Promotion:

Yes: Grade is atleast D

No: Grade E

Assume the fees for the present year is 100000

If a student's grade is E or below then he is not granted any scholarship.

Take a student's marks as input and display his Grade, Scholarship granted(%), whether he is allowed promotion and net fees payable.

Sample Input:

Enter marks

77

Sample Output:

Grade: A, Scholarship: 10.000000 percent, Promotion: Y

Fees payable: 90000.000000

Sample Input:

Enter marks

-10

Sample Output:

Invalid Marks

Sample Input:

Enter marks

50

Sample Output:

Grade: C, Scholarship: 10.000000 percent, Promotion: Y

Fees payable: 90000.000000

Question #2

Write a C program to swap [interchange] values of two variables with or without a temporary variable. The swap can be swapping two floating point variables or two character variable.

Sample Input:

Select Data Type: 1. For Floating point and 2 for Character

1

Input two numbers:

14.27

18.46

Select Your option:

A. For without temporary variable and B. For with temporary variable

B

Output:

Swap using temporary variable,

Before swapping: X = 14.27 Y = 18.46

After swapping: X = 18.46 Y = 14.27

Sample Input:

Select Data Type: 1. For Floating point and 2 for Character

2

Input two characters:

Sd

Select Your option:

A. For without temporary variable and B. For with temporary variable

A

Output:

Swap without temporary variable,

Before swapping: X = S Y = d

After swapping: X = d Y = S

Sample Input:

Select Data Type: 1. For Floating point and 2 for Character

3

Output:

Invalid Input

Sample Input:

Select Data Type: 1. For Floating point and 2 for Character

2

Input two characters:

9h

Select Your option:

A. For without temporary variable and B. For with temporary variable

D

Output:

Invalid Option