**COMSATS University Islamabad,**

**Lahore Campus**

Logo, company name

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**Section: B**

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**Programming Fundamentals**

**LAB TASK 02**

**Exercise 2:** Write a program that reads 5 marks of different subjects out of 100 from the keyboard and determines and displays the sum and percentile of the marks. Then print grades and credit points on the basic of percentile as per following table:

|  |  |  |  |
| --- | --- | --- | --- |
| **Grades** | **Letter Grade** | **Credit Points** | **Percentage Marks** |
| A | (Excellent) | 4.0 | 90and above |
| A- |  | 3.7 | 85-89 |
| B+ |  | 3.3 | 80-84 |
| B | (Good) | 3.0 | 75-79 |
| B- |  | 2.7 | 70-74 |
| C+ |  | 2.3 | 65-69 |
| C | (Average) | 2.0 | 60-64 |
| C- |  | 1.7 | 55-59 |
| D | (Minimum passing) | 1.3 | 50-54 |
| F | (Failing) | 0.0 | Less than 50 |

**C Code:**

#include <stdio.h>

#include <stdlib.h>

/\* This program is prepared by Syed Asad Jamil. Reg no. SP22-BSE-123. Section: B on 27/03/2022(This Program find the Result and Grade of 5 subjects by using different conditions. \*/

int main()

{

int a, marks;

float percentage, sum=0;

for(a=1;a<=5;a++)

{

printf("Enter Your marks out of 100 : ");

scanf("%d",&marks);

sum=sum+marks;

}

{

printf("\nSum of Marks is : %.2f\n",sum);

percentage=sum/500 \*100;

printf("Percentage is : %.2f\n",percentage);

}

if(percentage>=90)

{

printf("Grade is : A \nCredit Points : 4.0 \nExcellent!!! \n");

}

else if(percentage>=85 && percentage<=89)

{

printf("Grade is : A- \nCredit Points : 3.7 \n");

}

else if(percentage>=80 && percentage<=84)

{

printf("Grade is : B+ \nCredit Points : 3.3 \n");

}

else if(percentage>=75 && percentage<=79)

{

printf("Grade is : B \nCredit Points : 3.0 \nGood!!! \n");

}

else if(percentage>=70 && percentage<=74)

{

printf("Grade is : B- \nCredit Points : 2.7 \n");

}

else if(percentage>=65 && percentage<=69)

{

printf("Grade is : C+ \nCredit Points : 2.3 \n");

}

else if(percentage>=60 && percentage<=64)

{

printf("Grade is : C \nCredit Points : 2.0 \nAverage!!! \n");

}

else if(percentage>=55 && percentage<=59)

{

printf("Grade is : C- \nCredit Points : 1.7 \n");

}

else if(percentage>=50 && percentage<=54)

{

printf("Grade is : D \nCredit Points : 1.3 \nMaximum Passing!!! \n");

}

else

{

printf("Grade is : F \nCredit Points : 0.0 \nFail!!!\n");

}

return 0;

}

**Output:**

Text

Description automatically generated with medium confidence

**Flowchart:**

A

Start

False

If per >=90

If per >=85 & <=89

True

False

Input a, marks, sum, per

True

If per >=80 & <=84

False

Grade: A

Credit Points:4.0

Sum=0, a=1

True

False

If per >=75 & <=79

Grade: A-

Credit Points:3.7

True

False

a<=5

If per >=70 & <=74

Grade: B+

Credit Points:3.3

If per >=65 & <=69

True

False

Grade: B

Credit Points:3.0

a++

True

True

Print (Input Your marks out of 100)

A

If per >=60 & <=64

If per >=55 & <=59

If per >=50 & <=54

True

True

True

False

False

False

False

Stop

Grade: F

Credit Points:0.0

Grade: B+

Credit Points:3.3

Grade: B+

Credit Points:3.3

Grade: C

Credit Points:3.3

Grade: C+

Credit Points:3.0

Grade: B-

Credit Points:2.7

else

Print sum, per

sum = sum + marks

per = sum/500 \*100