**1. Write a C program to read 5 subjects marks of a student and calculate his/her  Total and Percentage using arrays. And print the result as following criteria  Calculate percentage and grade according to following:**

**Percentage >= 90% : Grade A**

**Percentage >= 80% : Grade B**

**Percentage >= 70% : Grade C**

**Percentage >= 60% : Grade D**

**Percentage >= 40% : Grade E**

**Percentage < 40% : Grade F**

Program:-

#include <stdio.h>

void main()

{

int arr[5],i;

float sum=0,per;

for(i=0;i<5;i++)

{

printf("Enter marks for subject number %d :",i+1);

scanf("%d",&arr[i]);

sum+=arr[i];

}

per=(sum/500)\*100;

printf("\nThe percentage is: %f",per);

if(per>=90)

printf("\nGrade A");

else if(per>=80)

printf("\nGrade B");

else if(per>=70)

printf("\nGrade C");

else if(per>=60)

printf("\nGrade D");

else if(per>=40)

printf("\nGrade E");

else

printf("\nGrade F");

}

**OUTPUT:**

**![A screen shot of a computer

Description automatically generated]()![A screen shot of a computer

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**2. Write a C program to read two mark lists of equal size (10 size) and check  whether they are identical or not.**

**E.g.**

**mark list 1 : 22 33 44 55 66**

**mark list 2 : 22 33 44 55 66**

**Output : Identical**

Program:-

#include <stdio.h>

void main()

{

int arr1[10],arr2[10],i,t=0;

printf("Enter the values for mark list 1(10 values required) : ");

for(i=0;i<10;i++)

scanf("%d",&arr1[i]);

printf("Enter the values for mark list 2(10 values required) : ");

for(i=0;i<10;i++)

{

scanf("%d",&arr2[i]);

if(arr1[i]!=arr2[i])

{

t=1;

break;

}

}

if(t==0)

printf("\nIdentical");

else

printf("\nNot identical");

}

**OUTPUT:**

![Graphical user interface, text

Description automatically generated]()

**![A screenshot of a computer screen

Description automatically generated]()**

**3.Write a C program to read two 3x 3 matrix from user and perform addition and  subtraction of Matrices.**

Program:-

#include <stdio.h>

void main()

{

int matrix1[3][3],matrix2[3][3],add[3][3],sub[3][3],i,j;

printf("Input the 1st matrix: \n");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

scanf("%d",&matrix1[i][j]);

}

printf("\nInput the 2nd matrix: \n");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

scanf("%d",&matrix2[i][j]);

add[i][j]=matrix1[i][j]+matrix2[i][j];

sub[i][j]=matrix1[i][j]-matrix2[i][j];

}

}

printf("\nAddition of the two matrix give: /n");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

printf("%d ",add[i][j]);

printf("\n");

}

printf("\nSubstraction of the two matrix give: /n");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

printf("%d ",sub[i][j]);

printf("\n");

}

}

**OUTPUT:**

![Text

Description automatically generated]()

**4. Write C Program to store and print 12 values entered by the user by using  [2][3][2] array.**

Program:-

#include <stdio.h>

void main()

{

int arr[2][3][2],i,j,k;

printf("Enter the inputs(total 12): \n");

for(i=0;i<2;i++)

{

for(j=0;j<3;j++)

{

for(k=0;k<2;k++)

scanf("%d",&arr[i][j][k]);

}

}

printf("\nStored values are: \n");

for(i=0;i<2;i++)

{

for(j=0;j<3;j++)

{

for(k=0;k<2;k++)

printf("%d ",arr[i][j][k]);

printf("\t");

}

printf("\n");

}

}

**OUTPUT:**

![A screen shot of a computer

Description automatically generated]()

**5. WAP to find the sum of all elements in an integer array using function.**

Programs:-

#include <stdio.h>

int sum(int arr[],int num)

{

int temp=0,i;

for(i=0;i<num;i++)

temp+=arr[i];

return temp;

}

void main()

{

int num;

printf("Input the size of the array: ");

scanf("%d",&num);

int arr[num],i;

printf("Input the array: \n");

for(i=0;i<num;i++)

scanf("%d",&arr[i]);

printf("\nThe sum of the elements: %d",sum(arr,num));

}

**OUTPUT:**

![Text

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![Text

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**6. WAP to find the smallest and largest element in an array using function.**

Program:-

int max(int arr[],int num)

{

int max=arr[0],i;

for(i=1;i<num;i++)

{

if(max<arr[i])

max=arr[i];

}

return max;

}

int min(int arr[],int num)

{

int min=arr[0],i;

for(i=1;i<num;i++)

{

if(min>arr[i])

min=arr[i];

}

return min;

}

void main()

{

printf("Enter the size of the array: ");

int num;

scanf("%d",&num);

int i;

int arr[num];

for(i=0;i<num;i++)

scanf("%d",&arr[i]);

printf("\nThe max of the array is: %d",max(arr,num));

printf("\nThe min of the array is: %d",min(arr,num));

}

**OUTPUT:**

![A screen shot of a computer

Description automatically generated]()