GROUP-7

ASSIGNMENT-2

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QUESTION-19]

// Q-19]C program to input the angles of a triangle and check whether the triangle is valid or not.

LOGIC : Sum of all three angles = 180.

CODE:

```c
#include <stdio.h>

// Q-19]C program to input the angles of a triangle and check whether the triangle is valid or not.

void main() {
  int a1,a2,a3;
  printf("enter angle1 in degrees :");
  scanf("%d",&a1);
  printf("enter angle2 in degrees :");
  scanf("%d",&a2);
  printf("enter angle3 in degrees :");
  scanf("%d",&a3);
  if (a1+a2+a3 == 180) {
    printf("The triangle is valid");
  } else {
    printf("The triangle is invalid");
  }
}
```

OUTPUT:-

enter angle1 in degrees :60

enter angle2 in degrees :60

enter angle3 in degrees :60

The triangle is valid

QUESTION-20]

```
/*
Q-20]C program to input marks of five subjects Physics, Chemistry, Biology,
Mathematics,
and Computer. Calculate the percentage in each subject, total marks, total
marks in
percentage, and grade according to the following:
- Maximum marks = 50 for each subject
- Percentage ≥ 90% : Grade A
- Percentage ≥ 80% : Grade B
- Percentage ≥ 70% : Grade C
- Percentage ≥ 60% : Grade D
- Percentage ≥ 40% : Grade E
- Percentage < 40% : Grade F
*/
```

CODE:-

```
#include <stdio.h>

/*
Q-20]C program to input marks of five subjects Physics, Chemistry, Biology,
Mathematics,
and Computer. Calculate the percentage in each subject, total marks, total
marks in
percentage, and grade according to the following:
- Maximum marks = 50 for each subject
- Percentage ≥ 90% : Grade A
- Percentage ≥ 80% : Grade B
- Percentage ≥ 70% : Grade C
- Percentage ≥ 60% : Grade D
- Percentage ≥ 40% : Grade E
- Percentage < 40% : Grade F
*/

void main() {
  int p, c, b, m,cs;
  int p1,p2,p3,p4,p5;

  printf("Enter Physics Mark :");
  scanf("%d",&p);
  printf("Enter Chemistry Mark :");
  scanf("%d",&c);
  printf("Enter Biology Mark :");
  scanf("%d",&b);
  printf("Enter Math Mark :");
  scanf("%d",&m);
  printf("Enter Computer Mark :");
```

```c
  scanf("%d",&cs);

  p1 = p;
  printf("Percentage in physics is :%d\n", p1);
  p2 = c;
  printf("Percentage in chemistry is :%d\n", p2);
  p3 = b;
  printf("Percentage in biology is :%d\n", p3);
  p4 = m;
  printf("Percentage in Math is :%d\n", p4);
  p5 = cs;
  printf("Percentage in cs is :%d\n", p5);

  int total_marks = p + c + b + m + cs;
  printf("Total marks is :%d\n", total_marks);

  float percentage = total_marks / 5;

  printf("Total percentage is :%f\n", percentage);

  if (percentage>90){
    printf("Grade A!");
  }
  else if (percentage >= 90)
  {
    printf("Grade A!");
  }
  else if (percentage >= 80)
  {
    printf("Grade B!");
  }
  else if (percentage >= 70)
  {
    printf("Grade C!");
  }
  else if (percentage >= 60)
  {
    printf("Grade D!");
  }
  else if (percentage >= 40)
  {
    printf("Grade E!");
  } else {
    printf("Grade F!");
  }

}
```

OUTPUT:-

Enter Physics Mark :100

Percentage in biology is :100

Percentage in Math is :100

Percentage in cs is :100

Total marks is :500

Total percentage is :100.000000

Grade A!

QUESTION-21]

```
// Q-21]C program to create a Simple Calculator using switch case.
```

CODE:-

```
#include <stdio.h>

// Q-21]C program to create a Simple Calculator using switch case.

void main() {
  int num1,num2;
  char operator;
  printf("operator (+, -, *, /) :");
  scanf("%c", &operator);
  printf("enter number1 :");
  scanf("%d",&num1);
  printf("enter number2 :");
  scanf("%d",&num2);

  switch(operator) {
    case '+':
      printf("Ans = %d", num1 + num2);
      break;

    case '-':
      printf("Ans = %d", num1 - num2);
      break;

    case '/':
      printf("Ans = %d", num1 / num2);
      break;

    case '*':
      printf("Ans = %d", num1 * num2);
      break;

    default:
      printf("Invalid operator!");
    }
}
```

OUTPUT:-

operator (+, -, *, /) :+

enter number1 :4

enter number2 :4Ans = 8