Assignment - 8 C Language LIVE Community Classes MySirG

1. Write a program to check whether a given number is divisible by 3 and divisible by 2.
Answer:
Code:

```
#include<stdio.h>
main()
{
   int a,b,c;
   printf("Enter The Number = ");
   scanf("%d",&a);
   b=a%2;
   c=a%3;
   if(b==0)
   printf(" The given number is Divisible by 2");
   else
   printf(" The given number is not Divisible by 2");
   if(c==0)
   printf("\n and The given number is Divisible by 3");
   else
   printf("\n  and The given number is not Divisible by 3");

}
```

2. Write a program to check whether a given number is divisible by 7 or divisible by 3.
Answer:
Code:

```
#include<stdio.h>
main()
{
   int a,b,c;
   printf("Enter The Number = ");
   scanf("%d",&a);
   b=a%7;
   c=a%3;
   if(b==0)
   printf(" The given number is Divisible by 7");
   else
```

```
   printf(" The given number is not Divisible by 7");
   if(c==0)
   printf("\n and The given number is Divisible by 3");
   else
   printf("\n  and The given number is not Divisible by 3");
}
```

3. Write a program to check whether a given number is positive, negative or zero.
Answer:
Code:

```
#include<stdio.h>
main()
{
   int a;
   printf("Enter The Number = ");
   scanf("%d",&a);
   if(a>0)
   printf("Given Number is Positive Number");
   else if(a==0)
   printf("Given Number is Zero");
   else
   printf("Given number is Negative Number");
}
```

4. Write a program to check whether a given year is a leap year or not.
Answer:

```
#include<stdio.h>
main()
{
   int a;
   printf(" Enter A year = ");
   scanf("%d",&a);
   if(a%4==0)
   printf("Entered Year is Leap Year");
   else
   printf("Entered year is not leap Year");
}
```

5. Write a program to find greater among three numbers. If two or three numbers are identical and greatest among all then print it only once.
Answer:

Code:

```
//5. Write a program to find greater among three numbers. If two or three numbers are
//identical and greatest among all then print it only once.
#include<stdio.h>
main()
{
	int a,b,c;
	printf("Enter Num 1 = ");
	scanf("%d",&a);
	printf("Enter Num 2 = ");
	scanf("%d",&b);
	printf("Enter Num 3 = ");
	scanf("%d",&c);

	if(a>b)
	{
		if(a>c)
		printf("\n Num1 is Greater = %d",a);
		else
		printf("\n Num3 is Greater = %d",c);
	}
	else if(b>c)
	{
		printf("\n Num 2 is Greater = %d",b);
	}
	else
	{
		printf("\n Num 3 is Greater = %d",c);
	}

	//second condition if numbers are identical
	if(a==b&&b==c)
	{
		printf("\n All Three Numbers Are Identical and Greatest : %d",a);
	}
	else if(a==b&&a>c)
	{
		printf("\n Num 1 and Num2 are Identical and Greatest : %d",a);
```

```
        }
        else if(b==c&&c>a)
        {
                printf("\n Num 2 and Num 3 are Identical and Greatest : %d",b);
        }
        else if(a==c&&a>b)
        {
                printf("\n Num 1 and Num 3 are identical and Greatest : %d",a);
        }

}
```

6. Write a program to check whether a given character is an alphabet (uppercase). alphabet (lower case), a digit or a special character.

Answer:

Code:

```
#include<stdio.h>
main()
{
        char a;
        printf("Enter The Character = ");
        scanf("%c",&a);
        if(a>='a'&&a<='z')
        printf("Given Character is alphabet (lower case)");
        else if(a>='A'&&a<='Z')
        printf("Given Character is alphabet (UPPER CASE)");
        else if(a>='1'&&a<='9')
        printf("Given Character is Digit");
        else
        printf("Given character is special Character");
}
```

7. Write a program which takes the length of the sides of a triangle as an input. Display whether the triangle is valid or not.

Answer :

Code :

```
#include<stdio.h>
#include<conio.h>
main()
{
```

```
	int a,b,c;
	printf("\n Enter Length of First Side = ");
	scanf("%d",&a);
	printf("\n Enter Length of Second Side = ");
	scanf("%d",&b);
	printf("\n Enter Length of Third Side = ");
	scanf("%d",&c);

	//we have to check every two sides sum is greater than remaining one, we
will use if else conditions
	if(a+b<c)
	printf("\n\n Triangle is not Valid");
	else if(b+c<a)
	printf("\n\n Triangle is not Valid");
	else if(a+c<b)
	printf("\n\n TrianIge is not Valid");
	else
	printf("\n\n Triangle is valid");
	getch();
}
```

8. Write a program which takes the month number as an input and display number of days in that month.

Answer:

Code:

```
#include<stdio.h>
#include<conio.h>
main()
{
	int a;
	printf("\n Enter Month Number = ");
	scanf("%d",&a);

	//we will use % operator but first we have to cover February and august
months
	//because february have only 28 days and august and juky have 31 days
	if(a==2)
	printf("\n Number of Days in this month are = 28");
	else if(a==8)
	printf("\n Number of Days in this month are = 31");
```

```
        else if(a%2==0)
        printf("\n Number of Days in this month are = 30");
        else
        printf("\n Number of Days in this month are = 31");
}
```

9. Write a program to find the nature of roots of a quadratic equation.
Answer:
Code:

```
#include<stdio.h>
main()
{
        int a,b,c,d;
        printf("Enter the coefficients of A B and C = ");
        scanf("%d",&a);
        printf("Enter the coefficients of A B and C = ");
        scanf("%d",&b);
        printf("Enter the coefficients of A B and C = ");
        scanf("%d",&c);
        d=b*b-(4*a*c);

        if(d<0)
        printf("two complex roots exist");
        if(d>0)
        printf("two real and distinct roots exist");
        if(d==0)
        printf("one real and repeated root exists");
}
```

10.Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. 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
Answer:

Code:

```
#include<stdio.h>
#include<conio.h>
main()
{
        int phy, chem, bio, math, comp, percentage;
        printf("Enter marks");
        printf("\nphy =");
        scanf("%d",&phy);
        printf("chem = ");
        scanf("%d",&chem);
        printf("Bio = ");
        scanf("%d",&bio);
        printf("math = ");
        scanf("%d",&bio);
        printf("comp = ");
        scanf("%d",&comp);
        percentage=(phy+chem+bio+math+comp)/5;

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

  getch();
}
```