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Subject: Programming Fundamentals

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① Write a C Program to Find maximum b/w two numbers:-

```
#include <stdio.h>
```

```
int max_of_two(int a, int b)
```

```
{    if(a > b)
    {
        return a;
    }
}
```

```
else
{
    return b;
}
```

```
}
```

```
int main()
```

```
{    int a, b;
```

```
    printf("Enter 1st number");
```

```
    scanf("%d", &a);
```

```
    printf("Enter 2nd number");
```

```
    scanf("%d", &b);
```

```
    int ans = max_of_two(a, b);
```

```
    printf("The maximum b/w a and b is %d", ans);
```

```
    return 0;
```

```
}
```



Q:- Write a C Program to check weather is negative, positive or zero.

```
#include <stdio.h>
```

```
int main ()
```

```
{
```

```
    int a;
```

```
    printf("Enter a number \n");
```

```
    scanf("%d", &a);
```

```
    if (a == 0)
```

```
    {
```

```
        printf("The number you entered is zero");
```

```
    }
```

```
    else if (a > 0)
```

```
    {
```

```
        printf("The number you entered is positive");
```

```
    }
```

```
    else
```

```
    { printf("The number you entered is negative");
```

```
    }
```

```
    return 0;
```

```
}
```

3) Write a C program to check whether a number is divisible by 5 and 11 or not.

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int a;
```

```
    printf("Enter a number");
```

```
    scanf("%d", &a);
```

```
    if (a % 5 == 0)
```

```
    { printf("The number you entered is divisible by 5);
```

```
    }
```

```
    else if (a % 11 == 0)
```

```
    { printf("The number you entered is divisible by 11);
```

```
    }
```

```
    else
```

```
    { printf("The number you entered is not divisible by
```

```
      5 & 11);
```

```
    }
```

```
    return 0;
```

```
}
```



4) Write a C program to check whether a number is even or odd.

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int a;
```

```
    printf("Enter a number");
```

```
    scanf("%d", &a);
```

```
    if (a%2 == 0)
```

```
    {
```

```
        printf("The number you entered is even");
```

```
    }
```

```
    else
```

```
    {
```

```
        printf("The number you entered is odd");
```

```
    }
```

```
    return 0;
```

```
}
```



5) Write a C Program to enter marks of Five subjects, Physics, Chemistry, Biology, Math, and computer. Calculate Percentage and grade according to following.

|                       |          |
|-----------------------|----------|
| Percentage $\geq$ 90% | Grade A  |
| Percentage $\geq$ 80% | Grade B  |
| Percentage $\geq$ 70% | Grade C  |
| Percentage $\geq$ 60% | Grade D  |
| Percentage $\geq$ 50% | Grade E  |
| Percentage $\geq$ 40% | Grade F. |

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

```
    int a, b, c, d, e, sum;
    float Percentage;
    printf("Enter marks of Physics");
    scanf("%d", &a);
    printf("Enter marks of Chemistry");
    scanf("%d", &b);
    printf("Enter marks of Biology");
    scanf("%d", &c);
    printf("Enter marks of Mathematics");
    scanf("%d", &d);
```



```
printf("Enter the marks of computer")
scanf("%d", &e);

sum = a + b + c + d + e ;
percentage = sum / 5.0 ;
printf("Your Percentage is %.2f\n", percentage);
if (percentage >= 90)
    printf("Your Grade is A");
else if (percentage >= 80)
    printf("Your Grade is B");
else if (percentage >= 70)
    printf("Your Grade is C");
else if (percentage >= 60)
    printf("Your Grade is D");
else if (percentage >= 40)
    printf("Your Grade is E");
else
    printf("Your Grade is F");

return 0 ;

}
```



b) Write a C program to input electricity unit charges and calculate total electricity bill according to given conditions:  
 for first 50 unit RS 0.50/unit.  
 for next 100 unit RS 0.75/unit.  
 for next 100 units RS 1.20/unit.  
 for above 250 units RS 1.50/unit  
 An additional surcharge of 20% added to bill.

```
int unit;
#include <stdio.h>
int main()
{
    int unit;
    float amount, total_amount, sur_charge;
    printf("Enter total unit consumed");
    scanf("%d", &unit);

    if (unit <= 50)
    {
        amount = unit * 0.50;
    }
    else if (unit <= 150)
    {
        amount = 25 + ((unit - 50) * 0.75);
    }
}
```



```
else if (unit <= 250)
{ amount = 100 + (unit - 150) * 1.20;
}
```

```
else
{ amount = 220 + (unit - 250) * 1.50;
}
```

```
sur_charge = amount * 0.20;
```

```
total_amount = amount + sur_charge;
```

```
printf("Total cost of electricity is %.2f", total_amount);
```

```
return 0;
```

```
}
```