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Assignment -10

1. Write a function to calculate the area of circle (TSRS)

```
#include <stdio.h>
int main()  int area(int i);
{
  int  area, r;
  printf(" Enter radius of circle");
  scanf("%d", &r)
     ar = area(r)
     printf(" Area of circle %d ", ar);
}
int  area (int i)
{
  int s=0;
    s= 22/7 *(i*i);
    return s;
}
```

(2) Write a program & function to calculate simple interest (ISRS

```
#include <stdio.h>

int sim(int p, int r, int t);
int sim(int p, int r, int t)
{
    int SI=0;
    SI= (p*r*t)/100;
    return SI;
}
int main()
{
    int x,y,z, c=0;
    printf("Enter principal, Rate, time");
    scanf("%d %d %d", &x, &y, &z);
    c= sim(x,y,z);
    printf("The simple interest is %d", c);
    return 0;
}
```

3. Write a function to check whether a given Number is even or odd. Return 1 if the Number is even, otherwise return 0 (ISRS)

```
#include<stdio.h>
int evod(int n);
int evod(int n)
{
    if(n%2==0)
        return 1;
    else
        return 0;
}
int main()
{
    int s;
    printf("Enter a Number");
    scanf("%d",&s);
    s = evod(s);
    printf("%d", s);
return 0;
}
```

4. Write a function to print first N natural Numbers. (1 to N)

```
#include <stdio.h>
Void nat(int n);
Void nat(int n)
{
    int i;
    for(i=1; i<=n; i++)
    {
        Printf("%d", i);
    }
}
int main()
{
    int x;
    printf("Enter a Number");
    Scanf("%d", &x);
    nat(x);
    return 0;
}
```

(5) Write a function to print N odd Natural Number (TSRN)

```
#include <stdio.h>
Void nat(int n);
Void nat (int n)
{
    int i;
    for(i=1; i<=n; i+=2)
    {
        Printf("%d,", i);
    }
}
int main()
{
    int x;
    printf("Enter a Number");
    Scanf("%d,",&x);
    nat(x);
    return 0;
```

}

(6) Write a function to calculate the factorial of Number (USER)

```
#include<stdio.h>
int fact(int n);
int fact(int n)
{
    int i, int c=1;
    for(i=1; i<=n; i++)
    {
        c=c*i;
    }
    return c;
}
```

```
int main()
{
    int x,y;
    printf("Enter a Number \n");
    scanf("%d", &x);
    y=fact(x);
    printf("*****\n");
    printf("factorial of Number is %d!
        %d", x,y);
    return 0;
}
```

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7. Write a function to calculate the Number of Combination one can make from n items and r selected at a time (nCr)

```
#include<stdio.h>
int Combi(int n, int r);
int fact(int n);
int Combi(int n, int r)
{
    int com = 0;
    return com = fact(n) / (fact(n-r) * fact(r));
}
int main()
{
    int d,e,c;
    printf("* * * * * * * * * *\n");
    printf("Enter Number of item n and Number item
        which is selected r\n");
    Scanf("%d %d", &d, &e);
    S = Combi(d,e);
    printf("* * * * * * * * * *\n");
    printf("Combination is %d", c);
    reton 0;
}
int fact(int n);
{
    Int i, c=1;
    for(i=1; i<=n; i++)
    {
        c = c*i;
    }
    return c;
}
```

Signature.....

(8) Write a function to calculate the Number of arrangements one can make from n item and r selected at a time (TSRS)

```
#include <stdio.h>
int fact(int n);
int arng(int n, int r);
int arng(int n, int r)
  {
    int s=0;
    return fact(n) / fact(n-r);
  }
int main()
  {
    int d, e, c;
    printf("*********\n");
    printf("Enter Number of item n and Number item
            which is selected r\n");
    Scanf("%d %d", &d, &e);
    c= arng(d,e);
    printf("The Number of Arrangement is : %d", c);
    return 0;
  }
int fact(int n)
  {
    int i, c=1;
    for(i=1; i<n; i++)
      {
        c= c*i;
      }
    return c;
  }
```

Signature.....

(9) Write a function check whether a given contains a given digit or not. (TSRS)

```
#include <stdio.h>
int check(long int n, int s);
int check(long int n, int s)
  {
    int i, c;
      for(i=1; i<c=n; i++)
        {
          c = n%10
          if(c==s)
            {
              return s;
              break;
            }
          else
            c = c/10;
        }
  }
  int main()
{ long int n, p, m;
  printf("Enter a Number \n");
  Scanf("%d", &n);
  printf("Enter a Number which u want check in Number");
  Scanf"%d", &p);
    m = check(n,p);
  printf("**********\n");
    if (p==m)
      printf("Contain");
    else
        printf("Not Contain");
          return 0;
}
```

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(10) Write a function to print all prime factors of a given Number. for example, if the Number is 36 then your result should be 2, 2, 3, 3. (ISRN)

```
#include < stdio.h>
  int primefact(int n);
  int primefact(int n)
  {
     int i;
     for(i=2; n!=1; i++)
     {
        while(n%i==0)
        {
           n=n/i;
           printf("%d, ", i);
        }
     }
  }
  int main()
  {
     primefact(36);
     return 0;
  }
```