FUNCTIONS

1. **A.) LCM USING WITH ARGUMENT WITH RETURN VALUE.**

```
#include <stdio.h>
int lcm(int a, int b)
{
    int lcm;
    lcm=(a>b)?a:b;
    while (1)
  {
        if (lcm% a==0 && lcm%b==0)
        {
            return lcm;
}
        lcm++;
    }
}
void main()
{
    int n1,n2,result;
    printf("Enter two positive integers: ");
    scanf("%d %d", &n1,&n2);
```

```
    result=lcm(n1,n2);
    printf("LCM of %d and %d is %d\n",n1,n2,result);
}
```

B.) LCM using without argument with return value.

```
#include <stdio.h>
int lcm()
{
    int a, b,lcm;
    printf("Enter two positive integers: ");
    scanf("%d %d", &a, &b);
    lcm = (a > b) ? a : b;
    while (1)
    {
        if (lcm % a == 0 && lcm % b == 0)
        {
            return lcm;
        }
        lcm++;
    }
}
void main()
{
    int result;
    result = lcm(); // Call the function
```

```
    printf("LCM is %d\n", result);
}
```

C.) LCM using with argument without return value.

```
#include <stdio.h>
void lcm(int a, int b)
{
    int lcm;
    lcm = (a > b) ? a : b;
    while (1)
    {
        if (lcm % a == 0 && lcm % b == 0)
        {
            printf("LCM of %d and %d is %d\n", a, b,lcm);
            break;
        }
        lcm++;
    }
}

Void main()
{
    int n1,n2;
    printf("Enter two positive integers: ");
    scanf("%d %d", &n1, &n2);
```

```
    lcm(n1,n2);
}
```

D.) LCM using without argument without return value

```
#include <stdio.h>
void lcm()
{
    int a,b,lcm;
    printf("enter the two numbwers:");
    scanf("%d%d",&a,&b);
    lcm=(a>b)?a:b;
    while (1)
    {
        if (lcm % a == 0 && lcm % b == 0)
        {
            printf("LCM of %d and %d is %d\n", a, b,lcm);
            break;
        }
        lcm++;
    }
}
void main()
{
    lcm();
}
```

2. A.) GCD USING WITH ARGUMENT WITH RETURN VALUE.

```
#include<stdio.h>
int gcd(int a,int b)
{
   int i,f;
   for(i=1;i<a;i++)
   {
      if(a%i==0 && b%i==0)
      {
         f=i;
      }
   }
   return f;
}
void main()
{
   int a,b,c;
   printf("enter two numbers:");
   scanf("%d%d",&a,&b);
   c=gcd(a,b);
   printf("gcd of %d and %d is %d\n",a,b,c);
}
```

B.) GCD using without argument with return value.

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

```
int gcd()
{
   int i,f,a,b;
   printf("enter two numbers:");
   scanf("%d%d",&a,&b);
   for(i=1;i<a;i++)
   {
      if(a%i==0 && b%i==0)
      {
         f=i;
      }
   }
   return f;
}
void main()
{
   int c;
   c=gcd();
   printf("gcd is %d",c);
}
```

C.) GCD with argument without return value.

```
#include<stdio.h>
void gcd(int a,int b)
```

```
{
   int i,f;
   for(i=1;i<a;i++)
   {
      if(a%i==0 && b%i==0)
      {
         f=i;
      }
   }
   printf("gcd is %d",f);
}
void main()
{
   int a,b;
   printf("enter two numbers:");
   scanf("%d%d",&a,&b);
   gcd(a,b);
}
```

D.) GCD WITHOUT ARGUMENT WITHOUT RETURN VALUE.

```
#include<stdio.h>
void gcd()
{
   int i,f,a,b;
   printf("enter two numbers:");
```

```
        scanf("%d%d",&a,&b);
        for(i=1;i<a;i++)
        {
            if(a%i==0 && b%i==0)
            {
                f=i;
            }
        }
        printf("gcd is %d",f);
    }
    void main()
    {
        gcd();
    }
```

3. a.)NUMBER PALINDROME with argument with return.

```
#include <stdio.h>
int Palindrome(int num)
{
   int original = num, reversed = 0, digit;
   while (num!=0)
   {
      digit = num % 10;
      reversed = reversed * 10 + digit;
```

```
        num /= 10;
    }
    return (original == reversed);
}
int main()
{
    int num;
    printf("Enter a number: ");
    scanf("%d", &num);
    if (Palindrome(num))
        printf("%d is a palindrome.\n", num);
    else
        printf("%d is not a palindrome.\n", num);
    return 0;
}
```

B.) Number Palindrome without argument with return value.

```
#include <stdio.h>
Int Palindrome()
{
    int num, original, reversed = 0, digit;
    printf("Enter a number: ");
    scanf("%d", &num);
    original = num;
    while (num!= 0)
```

```
    {
        digit = num % 10;
        reversed = reversed * 10 + digit;
        num /= 10;
    }
    return (original == reversed);
}
void main()
{
    if (Palindrome())
        printf("It is a palindrome.\n");
    else
        printf("It is not a palindrome.\n");
}
```

C.) Number Palindrome with argument with return value.

```
#include <stdio.h>
void Palindrome(int num)
{
    int original = num, reversed = 0, digit;
    while (num > 0)
    {
        digit = num % 10;
        reversed = reversed * 10 + digit;
```

```
        num /= 10;
    }
    if (original == reversed)
        printf("%d is a palindrome.\n", original);
    else
        printf("%d is not a palindrome.\n", original);
}
void main()
{
    int number;
    printf("Enter a number: ");
    scanf("%d", &number);
    Palindrome(number);
}
```

D.) Number palindrome without argument without return value.

```
#include <stdio.h>
Void Palindrome()
{
    int num, original, reversed = 0, digit;
    printf("Enter a number: ");
    scanf("%d", &num);
    original = num;
    while (num > 0)
    {
```

```
        digit = num % 10;
        reversed = reversed * 10 + digit;
        num /= 10;
    }
    if (original == reversed)
        printf("%d is a palindrome.\n", original);
    else
        printf("%d is not a palindrome.\n", original);
}
void main()
{
    Palindrome();
}
```

5. A.) SUM OF DIGIT with argument with return value.

```
 #include<stdio.h>
int sum(int a)
{
    int i,s=0;
    for(i=0;i<=a;i++)
    {
        s=s+i;
    }
    return s;
}
```

```
void main()
{
   int a,b;
   printf("enter the number:");
   scanf("%d",&a);
   b=sum(a);
   printf("s=%d",b);
}
```

B.) SUM OF DIGIT without argument with return value.

```
#include<stdio.h>
int sum()
{
   int i,a,s=0;
   printf("enter the number:");
   scanf("%d",&a);
   for(i=0;i<=a;i++)
   {
      s=s+i;
   }
   return s;
}
void main()
{
   int b;
```

```
    b=sum();
    printf("s=%d",b);
}
```

C.) SUM OF DIGIT with argument without return value.

```
#include<stdio.h>
int sum(int a)
{
    int i,s=0;
    for(i=0;i<=a;i++)
    {
        s=s+i;
    }
    printf("s=%d",s);
}
void main()
{
    int a;
    printf("enter the number:");
    scanf("%d",&a);
    sum(a);
}
```

D.) SUM OF DIGIT without argument without return value.

```
#include<stdio.h>
int sum()
```

```
{
   int i,a,s=0;
   printf("enter the number:");
   scanf("%d",&a);
   for(i=0;i<=a;i++)
   {
      s=s+i;
   }
   printf("s=%d",s);
}
void main()
{
   sum();
}
```

7. A.) REVERSE THE NUMBER with argument with return value.

```
#include<stdio.h>
int reverse(int n)
{
   int r,revn=0;
   while(n!=0)
   {
      r=n%10;
      revn=revn*10+r;
      n=n/10;
```

```
    }
    return revn;
}
void main()
{
    int n,a;
    printf("enter the number:");
    scanf("%d",&n);
    a=reverse(n);
    printf("revn=%d",a);
}
```

B.) without argument with return value.

```
#include<stdio.h>
int reverse()
{
    int r,n,revn=0;
    printf("enter the number:");
    scanf("%d",&n);
    while(n!=0)
    {
        r=n%10;
        revn=revn*10+r;
        n=n/10;
    }
```

```
    return revn;
}
void main()
{
    int a;
    a=reverse();
    printf("%d",a)
}
```

C.) with argument without return value.

```
#include<stdio.h>
void reverse(int n)
{
    int r,revn=0;

    while(n!=0)
    {
        r=n%10;
        revn=revn*10+r;
        n=n/10;
    }
    printf("revn=%d",revn);
}
void main()
{
```

```
    int n;
    printf("enter the number:");
    scanf("%d",&n);
    reverse(n);
}
```

D.) without argument without return value.

```
 #include<stdio.h>
void reverse()
{
    int r,revn=0;
    int n;
    printf("enter the number:");
    scanf("%d",&n);
    while(n!=0)
    {
        r=n%10;
        revn=revn*10+r;
        n=n/10;
    }
    printf("revn=%d",revn);
}
void main()
{
    reverse();
```

```
}
```

9.) A.) EVEN OR ODD with argument with return value.

```
#include<stdio.h>
int evod(int a)
{
   if(a%2==0)
   {
      return 1;
   }
   else
   {
      return 0;
   }
}
void main()
{
   int a,b;
   printf("enter the number:");
   scanf("%d",&a);
   if(evod(a))
   {
      printf("%d is even.\n",a);
   }
   else
```

```
    {
        printf("%d is odd.\n",a);
    }
}
```

B.) without argument with return value#include<stdio.h>

```
int evod()
{
    int a;
    printf("enter the number:");
    scanf("%d",&a);
    if(a%2==0)
        return 1;
    else
        return 0;
}
void main()
{
    if(evod())
    {
        printf("%d is even.\n");
    }
    else
    {
        printf("%d is odd.\n");
```

```
    }
}
```

12.) A.) POWER with argument with return value.

```
#include<stdio.h>
int power(int b,int e)
{
    int i;
    long long r=1;
    for(i=1;i<=e;i++)
    {
        r=r*b;
    }
    return r;
}
void main()
{
    int b,e,n;
    printf("enter the two number:");
    scanf("%d%d",&b,&e);
    n=power(b,e);
    printf("power=%d",n);
}
```

B.) without argument with return value.

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

```
int power()
{
   int i;
   int b,e;
   printf("enter the two number:");
   scanf("%d%d",&b,&e);
   long long r=1;
   for(i=1;i<=e;i++)
   {
      r=r*b;
   }
   return r;
}
void main()
{
   int n;
   n=power();
   printf("power=%d",n);
}
```

C.) with argument without return value.

```
#include<stdio.h>
int power(int b,int e)
{
   int i;
```

```
    long long r=1;
    for(i=1;i<=e;i++)
    {
        r=r*b;
    }
    printf("power:%d",r);
}
void main()
{
    int b,e;
    printf("enter the two number:");
    scanf("%d%d",&b,&e);
    power(b,e);
}
```

13. A.) SUM OF CUBE OF N NUMBERS with argument with return value.

```
#include <stdio.h>
int sum(int n)
{
    int i, s=0;
    for (i=1;i<=n;i++)
    {
        s=s+i*i*i;
    }
```

```
    return s;
}
void main()
{
    int n,r;
    printf("Enter a positive integer: ");
    scanf("%d", &n);
    r=sum(n);
    printf("Sum of cubes of first %d numbers = %d\n", n, r);
}
```

B.) without argument with return value

```
#include <stdio.h>
int soc()
{
    int n,i,s=0;
    printf("Enter a positive integer: ");
    scanf("%d", &n);
    for (i = 1; i <= n; i++)
    {
        s=s+i * i * i;
    }
    return s;
}
void main()
```

```
{
    int result;
    result = soc(); // Function call
    printf("Sum of cubes = %d\n", result);
}
```

C.) with argument without return value.

```
#include <stdio.h>
void soc(int n)
{
    int i,s=0;
    for (i = 1; i <= n; i++)
    {
        s=s+i * i * i;
    }
    printf("s=%d",s);
}
void main()
{
    int n;
    printf("enter the number:");
    scanf("%d",&n);
    soc(n);
}
```

D.) without argument without return value.

```
#include <stdio.h>
void soc()
{
   int i,n,s=0;
   printf("enter the number:");
   scanf("%d",&n);
   for (i = 1; i <= n; i++)
   {
      s=s+i * i * i;
   }
   printf("s=%d",s);
}
void main()
{
   soc();
}
```

14.) A.) PERFECT NUMBER with argument with return value.

```
#include<stdio.h>
int perfect(int n)
{
   int i,s=0;
   for(i=1;i<n;i++)
   {
      if(n%i==0)
```

```
        {
            s=s+i;
        }
    }
    if(n==s)
    return 1;
    else
    return 0;
}
void main()
{
    int n;
    printf("enter the number:");
    scanf("%d",&n);
    if(perfect(n))
    {
        printf("%d is a perfect number.\n",n);
    }
    else
    {
        printf("%d is not a perfect number.\n",n);
    }
}
```

B.) without argument with return value.

```
#include<stdio.h>
int perfect()
{
   int n,i,s=0;
   printf("enter the number:");
   scanf("%d",&n);
   for(i=1;i<n;i++)
   {
      if(n%i==0)
      {
         s=s+i;
      }
   }
   if(n==s)
   return 1;
   else
   return 0;
}
void main()
{
   if(perfect())
   {
      printf("%d is a perfect number.\n");
   }
```

```
    else
    {
        printf("%d is not a perfect number.\n");
    }
}
```