process's address space -
   code seg, data seg, stack, heap allocated for a process.

```
#include<iostream>
using namespace std;

int sum(int,int);        // function declaration / prototype / signature

int main()
{
   int num1, num2, res;
   num1=14, num2 = 24;

   res = sum(num1,num2);    // function call

   cout<<"\n Res = "<<res;

   return 0;
}

//function definition
int sum(int a, int b)
{
  return a+b;
}
```

---

void keyword - means nothing / unknown

```
void print_line()
{

    cout<<"-----------------------------------------------";
    return;
}
```

---

menu driven program

1. sum of digits of number
2. reverse of number
3. factorial of a number
4. cube of a number
5. power of a number to number
6. display line
7. exit

```
#include<iostream>
using namespace std;
```

```
int sum(int);
int reverse(int);
int fact(int);
int cube(int);
int pow(int, int);
void display_line();

int main()
{
   int num1, num2, res;
   char ch;

   do {
      display_line();
        1. sum of digits of number
        2. reverse of number
        3. factorial of a number
        4. cube of a number
        5. power of a number to number
        6. exit
      display_line();
        cout<<"\n Enter choice";
        cin>>ch;
        if((ch>='1') && (ch<='4'))
        {
           cout<<"\n Enter a number";
           cin>>num1;
        }
        if(ch=='5')
        {
           cout<<"\n Enter n and m..";
           cin>>num1;
           cin>>num2;
        }
        switch(ch) {
           case '1' : res = sum(num1);
                      cout<<"\n Sum of digits = "<<res;
                      break;
           case '2' : cout<<"\n Reverse = "<<reverse(num1);
                      break;
           case '3' : res = fact(num1);
                      cout<<"\n Factorial = "<<res;
                      break;
           case '4' : cout<<"\n Cube = "<<cube(num1);   break;
           case '5' : res = pow(num1, num2);
                      cout<<"Result = "<<res;
                      break;
           case '6' : break;
           default  : cout<<"\nInvalid choice...";
        }//end of switch
     }while(ch!='6');

    return 0;
```

```
}//end of main

void display_line()
{
   cout<<"\n ------------------------------------------";
}

int sum(int n)
{
  int s = 0,rem;
  while(n > 0)
  {
     rem = n % 10;
     s = s + rem;
     n = n / 10;
  }
  retrun s;
}


int reverse(int n)
{
  int rev_num = 0, rem;
  while(n>0)
  {
    rem = n % 10;
    rev_no = rev_no * 10 + rem;
    n = n /10;
  }
  retrun rev_no;
}

int fact(int n)
{
   int i, fact = 1;
   for(i=1;i<=n;i++)
     fact = fact * i;

   retrun fact;
}

int cube(int n)
{
    return n*n*n;
}

int pow(int n, int m)
{
    int i, p=1;

    for(i=1;i<=m;i++)
      p = p * n;

    return p;
```

```
}



int isDigit(char ch)
{
   if((ch>='0') && (ch<='9'))
      return 1;
   else
      return 0;
}

int isAlpha(char ch)
{
   if(((ch>='a') && (ch<='z'))  ||  ((ch>='A') && (ch<='Z')))
      return 1;
   else
      return 0;
}
```
