Pointer

-ye bi ek variable hota hain jese integer hota hai float hota hai vese he pointer variable h

-bas ye hai addrerss store karta hain

-special variable use to store an address of memory variable

  Some memory location

What are addresses?

-represent some memory location

-always positive in nature(unsigned)

-size of pointer variable is 8 bytes

-address are nit integers they are hexa codes.

Hexacode?

16-bit code

-Pointer variable 8 byte ka isliye hau kuki ham jo compiler use kar re hai wo 64 bit

     8*8=64

      4*8=32

          (Bit)

-Ab smjh ayega '&' kyu lagate hain

-& is use to return san address of memory variable

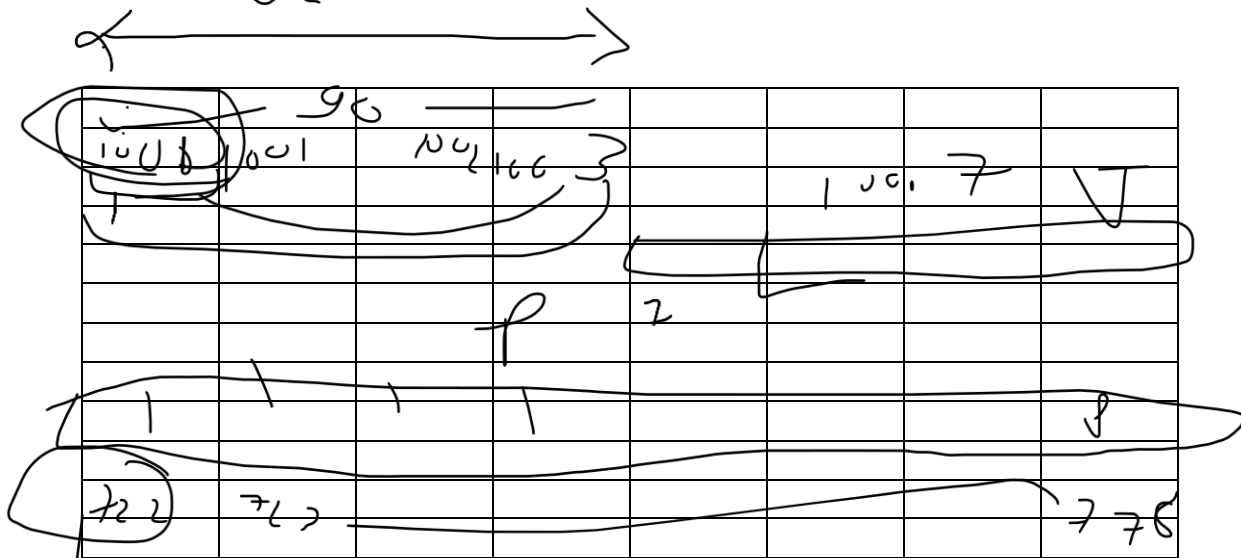-address +1 means proceed to next address

Syntax

<type>*<var name>;

  Ex- int *p;

Use *

-to declare pointer variable

-after declaration of pointer it means =value at address

-Apne Bunglow banaya to apne ek sath 4 plot liye(100,101,102,104)

-ab ghar ke bhr ek address likhna hai

Base Address

Program 1

//Multiplication of Matrix

//int x[3][3], y[3][3],z[3][3]

//x*y=z

//transpose of matrix

//3 * 4

#include<stdio.h>

```c
void main()
{
        int x[3][4],y[4][3],i,j;



        for(i=0;i<=2;i++)
        {
                for(j=0;j<=3;j++)
                {
                        printf("Enter x[%d][%d]:",i,j);
                        scanf("%d",&x[i][j]);
                }
        }
  for(i=0;i<=3;i++)
        {
                for(j=0;j<=2;j++)
                {
                  y[i][j]=x[j][i];



                }



        }


 // printf("\n");
 for(i=0;i<=3;i++)
        {
                for(j=0;j<=2;j++)
                {
                  printf("%d ",y[i][j]);
```

```c
                }
                printf("\n");
        }


        printf("\n");
        for(i=0;i<=2;i++)
        {
                for(j=0;j<=3;j++)
                {
                        printf("%d ",x[i][j]);
                }
                printf("\n");
        }
}
```

Program 2

```c
#include<stdio.h>
void main()
{
        int *p,a=90;
        float *k,j=100.7;

        printf("%d,%d,%d,%d",sizeof(p),sizeof(a),sizeof(k),sizeof(j));
}
```

Porogram 3

```c
#include<stdio.h>
void main()
{
        int *p,a=90;
        float *k,j=100.7;
```

```c
        printf("%u\n",a); //90

        printf("%u\n",&a);//1000

        printf("%x\n",&a);//62fe48

        printf("%u\n",*(&a));//value at 62fe48 90
}
```

Program 4

```c
//write c program to enter radius of a circle and find its diameter , circumference and area
#include<stdio.h>
void main()
{
    int r,dia,cirm,area;
    printf("enter radius :");
    scanf("%d" ,&r);

    dia=2*r;

    printf("diameter:%d\n",dia);

    cirm=2*3.14*r;

    printf("circumference:%d\n",cirm);

    area=3.14*r*r;

    printf("area:%d\n",area);
}
```

	0	1	2
1	0	0	4
2	0	2	1
	2	2	1

	0	1	2
0	0	1	1
1	2	3	1
2	1	2	3

1

0 1
2

0
1
2

M

M