2.PROGRAM TO EXPLAIN ALL DATATYPES INCLUDING SIGNED & UNSIGNED

#include <stdio.h>

int main()

{

printf("size of integer %d\n",sizeof(int));

printf("size of float %d\n",sizeof(float));

printf("size of character %d\n",sizeof(char));

printf("size of double %d\n",sizeof(double));

printf("size of long double %d\n",sizeof(long double));

printf("size of short int %d\n",sizeof(short int));

printf("size of long int %d\n",sizeof(long int));

printf("size of unsigned int %d\n",sizeof(unsigned int));

printf("size of signed int %d\n",sizeof(signed int));

return 0;

}

**Signed & unsigned:**

Signed : It can Represent both Positive and Negative values & an int datatye is default signed.

>>different types of signed modifiers are:

1]signed char:

Memory size:1 byte

Range:-128 to 127

EXAMPLE:

#include<stdio.h>

int main()

{

signed char C=-129;

printf("%d",C);//it wiil print output as 127 because in a range negative values are in anti-clock wise direction.

}

2]**signed short**

Memory size:2 byte

Range: −32,768 to 32,767

3]**signed int**:

Memory size:2 byte

Range: −32,768 to 32,767

4]**signed short int**:

Memory size:2 bye

Range: −32,768 to 32,767

EXAMPLE:

#include<stdio.h>

int main()

{

signed short int b=1234;// 1234 value is given the range so it will print 1234

printf("%u",b);

return 0;

}

Unsigned :

unsigned stores only positive values.

Types of unsigned:

1]**unsigned char:**

Memory size:1 bytes

Range:0 to 255.

EXAMPLE:

#include <stdio.h>

int main()

{

 int chr = 97;

    unsigned char i = chr;

    printf("unsigned char: %c\n", i);

  return 0;

}

2]**unsigned int:**

Memory size:2 bytes

Range:0 to 65535

EXAMPLE:

#include <stdio.h>

int main()

{

unsigned int a=97;

printf("%u",a);

return 0;

}