



# **Mawlana Bhashani Science and Technology University**

## **Department of Information and Communication Technology**

### **Assignment: 01**

**Assignment Name:** Range of All Data type Works in my Device

**Device info:**

System type: 64-bit operating system

Window Edition: Windows 11 Home Single Language

Code Blocks Version: Code::Blocks 20.03

**Submitted By**

Name: Kuldip Saha Mugdha

ID: IT22018

1<sup>st</sup> Year 2<sup>nd</sup> Semester

Session: 2021-2022

**Submitted To**

Bikash Kumar Paul

Assistant Professor

DEPARTMENT OF INFORMATION AND

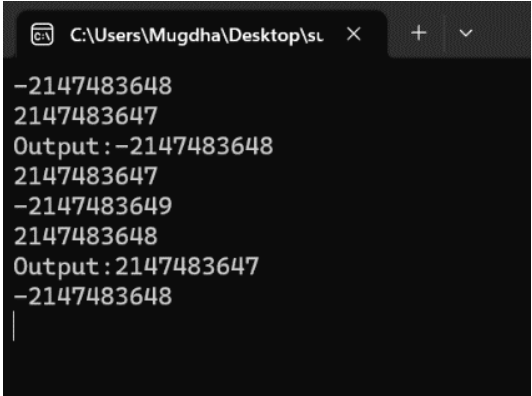
COMMUNICATION TECHNOLOGY

**MAWLANA BHASHANI SCIENCE AND  
TECHNOLOGY UNIVERSITY**

Date: 14-08-2023

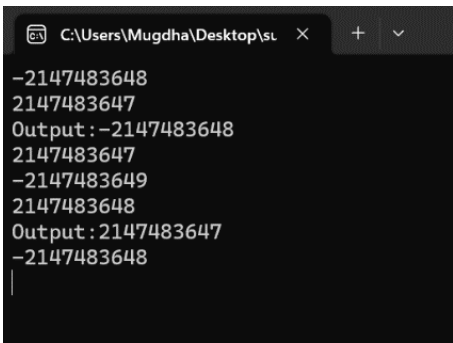
## 1. Integer

Data Type	Format Specifier	Storage Size	Range
int	%d	4 byte	-2,147,483,648 to 2,147,483,647
			-2,147,483,648 to 2,147,483,647

Code	INPUT/OUTPUT
<pre>#include&lt;stdio.h&gt; int main(){ int Kuldip,Mugdha; while(scanf("%d%d",&amp;Kuldip,&amp;Mugdha)==2){ printf("Output:%d\n%d\n",Kuldip,Mugdha); } return 0; }</pre>	 <pre>-2147483648 2147483647 Output:-2147483648 2147483647 -2147483649 2147483648 Output:2147483647 -2147483648</pre>

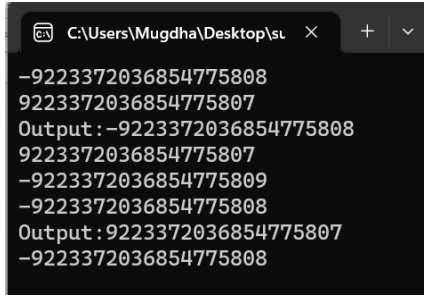
## 2. Long Integer

Data Type	Format Specifier	Storage Size	Range
long int	%ld	4 byte	-2,147,483,648 to 2,147,483,647
			-2,147,483,648 to 2,147,483,647

Code	INPUT/OUTPUT
<pre>#include&lt;stdio.h&gt; int main(){ long int Kuldip,Mugdha; while(scanf("%ld%ld",&amp;Kuldip,&amp;Mugdha)==2){ printf("Output:%ld\n%ld\n",Kuldip,Mugdha); } return 0; }</pre>	 <pre>-2147483648 2147483647 Output:-2147483648 2147483647 -2147483649 2147483648 Output:2147483647 -2147483648</pre>

### 3. Long Long Integer

Data Type	Format Specifier	Storage Size	Range
long long int	%lld	8 byte	-9223372036854775808 to 9223372036854775807
			-9223372036854775808 to 9223372036854775807

Code	INPUT/OUTPUT
<pre>#include&lt;stdio.h&gt; int main(){ long long int Kuldip,Mugdha; while(scanf("%lld%lld",&amp;Kuldip,&amp;Mugdha)==2){ printf("Output:%lld\n%lld\n",Kuldip,Mugdha); } return 0; }</pre>	 <pre>-9223372036854775808 9223372036854775807 Output:-9223372036854775808 9223372036854775807 -9223372036854775809 -9223372036854775808 Output: 9223372036854775807 -9223372036854775808</pre>

### 4. Float

Data Type	Format Specifier	Storage Size	Range
float	%f	4 byte	-2,147,483,648 to 2,147,483,647

Code	INPUT/OUTPUT
<pre>#include&lt;stdio.h&gt; int main(){ float Kuldip,Mugdha; while(scanf("%f%f",&amp;Kuldip,&amp;Mugdha)==2){ printf("Output:%f\n%f\n",Kuldip,Mugdha); } return 0; }</pre>	

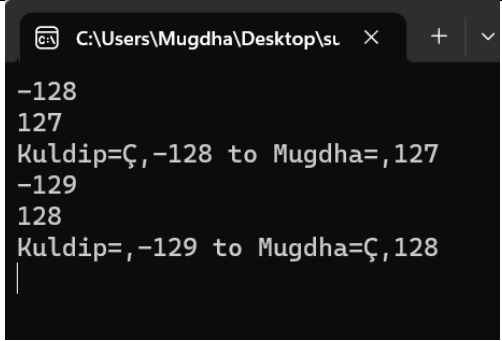
## 5. Double

Data type	Format Specifier	Storage Size	Range
double	%lf	8 byte	1.7E-308 to 1.7E+308

Code	Input/Output
<pre>#include &lt;stdio.h&gt;  int main() {     double Kuldip,Mugdha;     while(scanf("%lf%lf", &amp;Kuldip, &amp;Mugdha) == 2){         printf("%lf\n %lf\n", Sabbir, Ahamad);     }     return 0; }</pre>	

## 6. Char

Data type	Format Specifier	Storage Size	Range
char	%c	1 byte	-128 to 127
			-128 to 127

Code	Input/Output
<pre>#include &lt;stdio.h&gt; int main() { int Kuldip,Mugdha; while(scanf("%d%d", &amp;Kuldip, &amp;Mugdha) ==2){     printf("Kuldip=%c,%d to Mugdha=%c,%d\n",Kuldip,Kuldip,Mugd ha,Mugdha); }     return 0; }</pre>	 <pre>C:\Users\Mugdha\Desktop\st  X  +  v -128 127 Kuldip=Ç,-128 to Mugdha=,127 -129 128 Kuldip=,-129 to Mugdha=Ç,128  </pre>

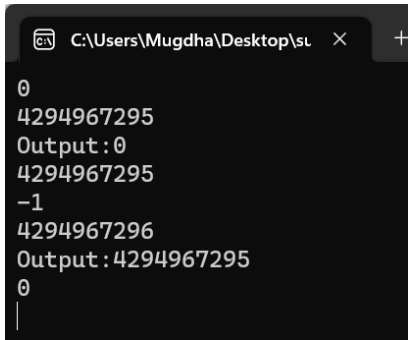
## 7. Long Double

Data type	Format Specifier	Storage Size	Range
long double	%Lf	16 byte	3.4E-4932 to 3.4E+4932

Code	Input/Output
<pre>#include &lt;stdio.h&gt;  int main() {     long double Kuldip,Mugdha;     while(scanf("%Lf%Lf", &amp;Kuldip, &amp;Mugdha) == 2){         printf("%Lf\n%Lf\n", Kuldip,Mugdha);     }     return 0; }</pre>	

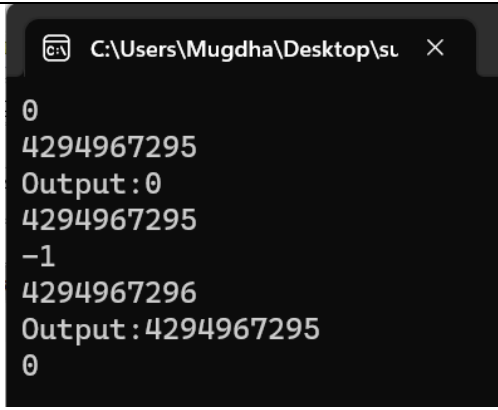
## 8. Unsigned int

Data type	Format Specifier	Storage Size	Range
unsigned int	%u	4 byte	0 to 4294967295
			0 to 4294967295

Code	Input/Output
<pre>#include &lt;stdio.h&gt;  int main() {     unsigned int Kuldip,Mugdha;     while(scanf("%u%u", &amp;Kuldip, &amp;Mugdha) == 2){  printf("Output:%u\n%u\n",Kuldip, Mugdha);     }     return 0; }</pre>	 <pre>C:\Users\Mugdha\Desktop\sl  ×  + 0 4294967295 Output:0 4294967295 -1 4294967296 Output:4294967295 0  </pre>

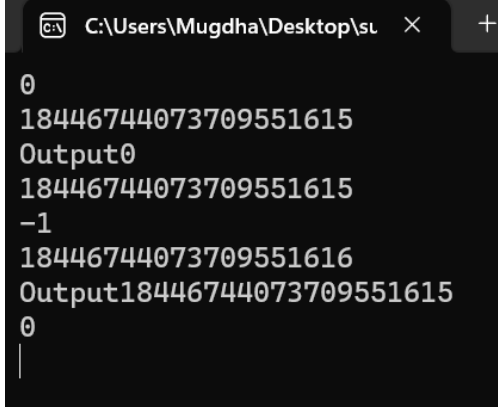
## 9. Unsigned long int

Data type	Format Specifier	Storage Size	Range
unsigned long int	%lu	4 byte	0 to 4294967295
			0 to 4294967295

Code	Input/Output
<pre>#include &lt;stdio.h&gt;  int main() {     unsigned long int     Kuldip,Mugdha;     while(scanf("%lu%lu", &amp;Kuldip,     &amp;Mugdha) == 2){  printf("Output:%lu\n%lu\n", Kuldip, Mugdha);     }     return 0; }</pre>	

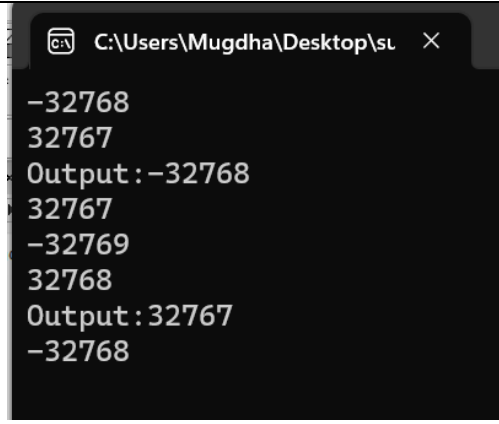
## 10. Unsigned long long int

Data type	Format Specifier	Storage Size	Range
unsigned long long int	%llu	8 byte	0 to 18446744073709551615
			0 to 18446744073709551615

Code	Input/Output
<pre>#include &lt;stdio.h&gt;  int main() {     unsigned long long int     Kuldip,Mugdha;     while(scanf("%llu%llu",     &amp;Kuldip, &amp;Mugdha) == 2){  printf("Output%llu\n%llu\n", Kuldip, Mugdha);     }     return 0; }</pre>	

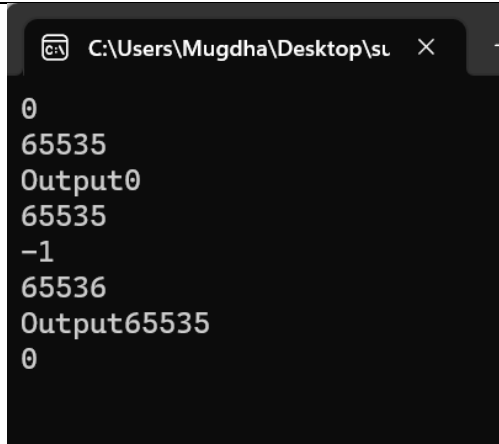
## 11. Short int

Data type	Format Specifier	Storage Size	Range
short int	%hd	2 byte	-32768 to 32767
			-32768 to 32767

Code	Input/Output
<pre>#include &lt;stdio.h&gt;  int main() {     short int Kuldip,Mugdha;     while(scanf("%hd%hd", &amp;Kuldip, &amp;Mugdha) == 2){  printf("Output:%hd\n%hd\n", Kuldip, Mugdha);     }     return 0; }</pre>	 <pre>C:\Users\Mugdha\Desktop\sl  X -32768 32767 Output:-32768 32767 -32769 32768 Output:32767 -32768</pre>

## 12. Unsigned short int

Data type	Format Specifier	Storage Size	Range
unsigned short int	%hu	4 byte	0 to 65535
			0 to 65535

Code	Input/Output
<pre>#include &lt;stdio.h&gt;  int main() {     unsigned short int Kuldip,Mugdha;     while(scanf("%hu%hu", &amp;Kuldip, &amp;Mugdha) == 2){  printf("Output%hu\n%hu\n", Kuldip, Mugdha);     }     return 0; }</pre>	 <pre>C:\Users\Mugdha\Desktop\sl  X 0 65535 Output0 65535 -1 65536 Output65535 0</pre>