**Space Complexity**

|  |  |  |  |
| --- | --- | --- | --- |
| Datatype | C | Java | Python |
| Int | 2 (or) 4 | 4 | 4 |
| Char | 1 | 2 | 2 |
| Float | 4 | 4 | 4 |
| Double | 8 | 8 | Doesn’t exist |
| Long | 4 (or) 8 | 8 | Doesn’t exist |
| Short | 2 | 2 | 2 |
| Byte | Doesn’t exist | 1 | Doesn’t exist |
| Bool | Doesn’t exist | 1 bit | 1 bit |

**Signed Char –**

1 byte = 8 bits

1 bit used for sign, remaining 7 are left

So, it ranges from -2^7 to (2^7)-1 ( -128 to 127)

**Unsigned Char-**

1 byte = 8 bits

So, it ranges from 0 to 2^8 (0 to 255)

**Signed Integer –**

Integer is 4 bytes

4 bytes = 32 bits

1 bit used for sign, remaining 31 are left

So, it ranges from -2^31 to (2^31)-1 ( -2147483648 to 2147483647)

**Unsigned Integer –**

Integer is 4 bytes

4 bytes = 32 bits

So, it ranges from 0 to 2^32 (0 to 4,294,967,295)