DAY 1 EVENING ASSINGMENT

DATA TYPES:

|  |  |  |
| --- | --- | --- |
| Data type | Size in Bytes | Range |
| byte | 1 byte | 0 to 255 |
| ushort | 2 byte | 0 to 65,535 |
| uint | 4 byte | 0 to 4,294,967,295 |
| ulong | 8 byte | 0 to 18,446,744,073,709,551,615 |
| sbyte | 1 byte | -128 to 127 |
| short | 2 byte | -32,768 to 32,767 |
| int | 4 byte | -2,147,483,648 to 2,147,483,647 |
| long | 8 byte | -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 |

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Size in bytes | precision | suffice |
| float | 4 byte | 6-9 digits | f |
| double | 8 byte | 15-17 digits | d |
| decimal | 16 byte | 28-29 digits | m |

|  |  |  |
| --- | --- | --- |
| Data type | Size in bytes | Range |
| bool |  | True or false |
| char | 2 byte |  |
| string | Depending on size of string |  |

NUMBER SYSTEM:

|  |  |
| --- | --- |
| Number system | Range |
| Binary System | 0,1 |
| Octal System | 0 to 7 |
| Decimal System | 0 to 9 |
| Hexadecimal System | 0 to 9 and A to F |

**3. Convert decimal to binary : 55, 24, 18**

2|55

2|27 – 1

2|27 – 1

2|13 – 1

2|6 – 1

2|3 – 0

|1 – 1

|  |  |
| --- | --- |
| Decimal | Binary |
| 55 | **110111** |
| 24 | **11000** |
| 18 | **10010** |

**4. Convert binary to decimal : 10110, 1011, 10010**

**1 0 1 1 1 0**

**2^5 2^4 2^3 2^2 2^1 2^0**

**32 0 8 4 2 0 = 46**

|  |  |
| --- | --- |
| Binary | Decimal |
| 10110 | **22** |
| 1011 | **11** |
| 101110 | **46** |