# Week 1: Design Document

By: Brandon Cole

**Gateway Community College**

**Class:** CSC120

**Instructor:** Dinesh Sthapit

**Assignment Due Date**: 10/26/2020

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1R36 | | 1 is your first digit because it is before the remainder |
| 8^2 = | 64 / | 100 | 36 is passed down |
|  | 4R4 | | 4 is your 2nd digit because it is before your remainder |
| 8^1 = | 8 | 36 | 4 is passed down |
|  | 4 | | 4 is your 3rd digit because it is all that is left. |
| 8^0 = | 1 | 4 | Digit1 + Digit2 + Digit 3 = 144R0 |
| Total is 144 | | | |

**Int n = InputNumber***;//Create array to store each number so you have a place for the remainder*

**Int[] octNum = new int[100];** *//Set Decimal place to 100//setup a counter for array*

**Int I = 0;** *//setup a loop to go through the remainders and store them these are the R above*

**octNum[i] = n % 8;** *//Is the Mod modifier getting the Remainder*

**n = n / 8;** *// add the current number left over and divide it by 8 until 0 which stops loop*

**i++;** *Add one to the counter to loop once*

**var result = 0** *// store result.*

**For ( int j = i – 1; j >=0; j--)** *//perform loop until j is empty basically going backwards from length down to zero to output the numbers;*

**result = int.Parse(result.ToString() + octalNum[j].ToString());** *// converts so can add result and add each digit of j so it’s not lost and stored in the result.*

Input Number

OctNum Array

Set to 100

Set Counter i

Value = 0

For loop

Int j = 1 – 1; j >=0; j—

octalNum[j]

End Loop

result = result + octalNum[j]

j is index this time

cotNum[i] = n % 8

n = n /8

i++

i meaning index

While number is not 0 meaning no remainder keep looping