WINTER SEMESTER 2016

CSE2003: DATA STRUCTURES AND ALGORITHMS (EMBEDDED LAB) SLOT: L51+L52

FACULTY: THENDRAL.P

ASSIGNMENT-1

Name: VOLETI RAVI

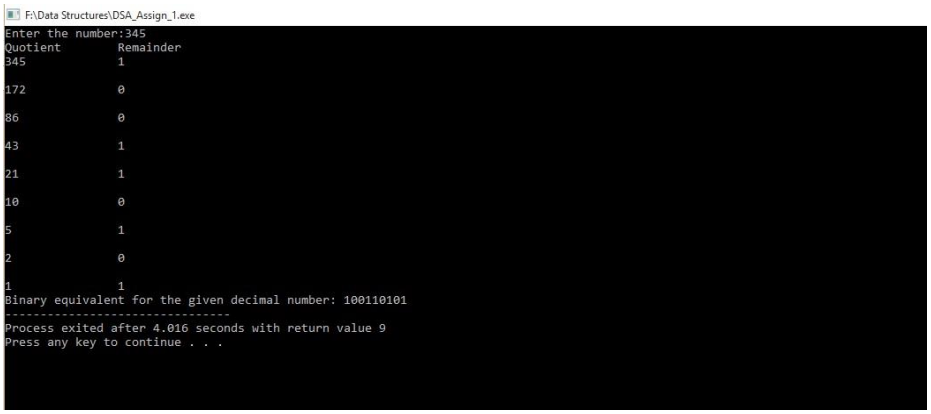
5.Convert a given 3 digit decimal number (ex: 345) to a reverse binary number. Ensure that the user has not given input more than 3 digits. (Note: 345%2= 1, 345/2=172, 172%2=0, 172/2=86, 86%2=0, 86/2=43, 43%2=1, 43/2=21, 21%2=1, 21/2=10, 10%2=0, 10/2=5,5%2=1, 5/2=2, 2%2=0. Print all remainders then and there to get the binary number in the reverse).

Code:

```
#include<stdio.h>

#include<string.h>
main()

{

        char l[10];

        printf("Enter the
        number:"); gets(l);

        int  l1[100];
        int n=atoi(l);
        if(strlen(l)!=3)

        printf("Invalid input");
        else{

                int k=0;
                printf("Quotient\tRemainder")
                ; while(n!=0){

                int y=n%2;
                printf("\n%d\t\t%d\n",n,y
                ); l1[k]=y;

                k=k+1;
                n=n/2;

        }

        int ps=0;

        printf("Binary equivalent for the given decimal
        number:\t"); while(ps<k){

                printf("%d",l1[ps]);
```

```
            ps=ps+1;
        }
        }
}
```

Output:



6. Write a program to read a three digit number and print the number in words (For example the number 153 is to be printed as one five three). Use Switch case control structure. **Code:**

```
#include<stdio.h>
#include<string.h>
int main()
{
   int n, i=0;
   char a[100];

l1:    printf("Enter the
   number:"); scanf("%s", &a);
     printf("\nIn Words: ");
   int num=strlen(a);
   while(i!= num)
   {
      switch(a[i])
      {
         case '0': printf("Zero ");
            break;
         case '1': printf("One ");
            break;
         case '2': printf("Two ");
            break;
```

```
case '3': printf("Three ");
    break;

case '4': printf("Four ");
```

```
            break;

        case '5': printf("Five ");
            break;

        case '6': printf("Six ");
            break;

        case '7': printf("Seven ");
            break;

        case '8': printf("Eight ");
            break;

        case '9': printf("Nine ");
            break;

    }


    i++;

  }

  char c;

  printf("\n\nWould you like to
  continue?y/n"); scanf("%s",&c);

  if(c=='y'){printf("\n");goto l1;}
   return 0;

}
```

Output: