**CS120 Fundamental of Programming**

**Lab No. 4: Logical Operators and Decision Structure**

**Exercises**

1. Write a program that accepts an integer number and prints whether the entered number is a 1-digit (0-9), two digit (10-99), three digit(100-999), four digit(1000-9999), or a five-or-more digit number.

#include <stdio.h>

int main()

{

int i;

printf("Enter a number : ");

scanf("%d", &i);

if ( i >= 0 && i <= 9 )

printf("%d is a 1-digit number\n", i);

else if ( i >= 10 && i <= 99 )

printf("%d is a 2-digit number\n", i);

else if ( i >= 100 && i <= 999 )

printf("%d is a 3-digit number\n", i);

else if ( i >= 1000 && i <= 9999 )

printf("%d is a 4-digit number\n", i);

else

printf("%d is a 5-or-more digit number\n", i);

system("pause");

return 0;

}

1. Write a program that accepts a three digit number (e.g. 121) as input and prints whether the number is palindrome or not. A number is palindrome if it reads the same forward and backward (e.g. 121, 131, 232). Hint: you can use the division and remainder operators to find out the right-most and left-most digits. Comparing the right-most and left-most digits would provide the answer.

#include <stdio.h>

int main()

{

int num;

printf("Enter a number : ");

scanf("%d", &num);

int left\_digit, right\_digit;

left\_digit = num / 100;

right\_digit = num % 10;

if ( left\_digit == right\_digit )

printf("%d is palindrome\n", num);

else

printf("%d is not palindrome\n", num);

system("pause");

return 0;

}

1. Write a program that displays whether a number input from the keyboard is even or odd number. Use switch and case structure to print the correct output.

#include <stdio.h>

int main()

{

int num;

printf("Enter a number : ");

scanf("%d", &num);

switch ( num % 2 )

{

case 0:

printf("%d is even\n", num);

break;

case 1:

printf("%d is odd\n", num);

break;

}

system("pause");

return 0;

}