**Department of Electrical and Computer Engineering, NSU**

**CSE 115L: Fundamentals of Computer Programming (Section 4)**

**Lab 08 (Loop), Faculty: Rsl**

**Loop:** This loop is generally used for performing a same task, a fixed number of times.

|  |  |
| --- | --- |
| **Basic syntax of for loop:** | Example 1: |
| for (initialization; condition test; increment or decrement)  {  Code – C statements needs to be repeated  } | #include<stdio.h>  int main()  {  int i;  for(i=0; i<5 ; i++)  {  printf("Repeating %d times!\n",i);  }  return 0;  } |

[NOTES: i++ is the same as i=i+1]

|  |  |
| --- | --- |
| **Basic syntax of while loop** | Example 2: Print from startNum to endNum |
| variable initialization ;  while (condition)  {  statements ;  variable increment or decrement ;  } | #include<stdio.h>  int main()  {  int start,end,i;  printf("Please enter start number:");  scanf("%d",&start);  printf("Please enter end number:");  scanf("%d",&end);  i=start;  if(start<=end){  printf("Printing numbers from start to end(Inclusive):\n");  while(i<=end){  printf("%d ",i);  i++;  }  }  else  printf("Starting number should be less than or equal to ending number!\n");  return 0;  } |

|  |  |
| --- | --- |
| Ex-3 (while loop) Function Calling inside a loop | Ex-4 taking input from user using loop |
| #include<stdio.h>  void printHello();  int main()  {  int i=1;  while(i<=10)  {  printf("%d. ",i);  printHello();  printf("\n");  i++;  }  return 0;  }  void printHello(){  printf("Hello");  } | #include<stdio.h>  int main()  {  int size,num;  printf("how many numbers to take input:");  scanf("%d",&size);  int i=1;  while(i<=size)  {  printf("Enter number:");  scanf("%d",&num);  printf("\n");  printf("You entered: %d\n",num);  i++;  }  return 0;  } |

|  |  |
| --- | --- |
| **Basic syntax of Do-while loop** | Ex-5 taking input only even numbers |
| do  {  //C- statements  }while(condition test); | #include<stdio.h>  int main()  {  int num;  do{  printf("Enter a number:");  scanf("%d",&num);  }while(num%2==0);  return 0;  } |