**17CS2011 Object Oriented Programming in C++ Lab**

18CS2015 Object Oriented Programming Lab

Lab Instructions

# Instructions:

* 1. Login on time to the lab session
  2. The required softwares has to be installed in your system locally
  3. Donot travel or sit in a place which disturbs the session
  4. Any moment as per the request of the faculty member you have to show the screen and camera. Failing may leads to cancellation of attendance and lab mark.
  5. E-record and Videos are mandatory for all the exercises.
  6. Laptop is imperative for the session

## Mark Split-ups:

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Sl.No | Date | Title of the experiment | Presence of session(10) | Output (10) | Viva (5) | E-record and Viva (5) | Total(30) |
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1. **Record**
   1. Prepare record after getting your output verified for your exercise.
   2. You are expected to get your outputs verified in the respective lab.
   3. Strictly follow the given record template.
   4. Give your register number, exercise number, title and page number carefully.
   5. Output Screenshots must be taken with screen background color as white and foreground color as black. Font size must be 12. And font must be TimesNewRoman.
   6. Document Alignment
      1. Page Size : A4
      2. Page Orientation : Portrait
      3. Margins : Normal with Bold border lines
      4. Font : Times New Roman, Normal
      5. Font Size: 12
      6. Line spacing is single line for program and 1.5 for Aim, Algorithm and Result.

## E-Record Template:

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| Ex. No 1 | PALINDROME |
| Date :8/8/20 |
| **Aim**: To check whether the given number is Palindrome or not.  **Description:** To check whether the last digit of the string is equal to the first digit of the string.  **Code:**  #include<stdio.h>  #include<string.h>  #include<iostream>  using namespace std;  int main()  {  string a;  getline(cin,a);  cout<<"The given number is:";  cin>>a;  cout<<a<<endl;  if(a[0]==a[a.length()-1])    cout<<"The given number is a palindrome";  else  cout<<"The given number is not a Palindrome";  return 0;  }  **Sample Input:**  **Sample Output:**    **Video: URL:**  **Result:** Thus the C++ program to check whether a given number is palindrome or not is executed and verified successfully. | |

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| Ex. No:2 | **CONTROL STATEMENTS** |
| Date:8/8/20 |
| **Aim:**  **Description**: Print the above pattern using control statement(for loop)  **Code:**  #include<stdio.h>  #include<conio.h>  #include<iostream>  using namespace std;  int main()  {  int n,i,j;  printf("How many rows :");  scanf("%d",&n);  for(int i=1;i<=n;i++)  {  for(int j=1;j<=2\*n-1;j++)  {  if (j>=n-(i-1) && j<=n+(i-1))  {  printf("\* ");  }  else  printf(" ");  }  printf("\n");  }  return 0;  }  **Sample Input**:    **Sample Output:**    **Video: URL:**  **Result:**Thus the C++ program to print the given pattern is executed and verified successfully. | |

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| Ex. No:3 | **PATTERN** |
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| Date:8/8/20 |
| **Aim:**    **Description:** Using for statement, compute the given pattern  **objectives Code:**  #include<stdio.h>  #include<iostream>  using namespace std;  int main()  {  int i,j,k,l,n;  cout<<"no of rows:";  cin>>n;  for(i=1;i<=n;i++)  {  for(j=1;j<=n-i;j++)  {  cout<<" ";  }  for(k=1;k<=i;k++)  {  cout<<" "<<k;  }  for(l=i-1;l>=1;l--)  {  cout<<" "<<l;  }  cout<<"\n";  }  return 0;  }  **Sample Input:**  **Sample Output:**    **Video:**  **Result:** Thus the program to print the given pattern is executed and verified successfully. | |

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| Ex. No:4 | **Calculate Electricity bill for the given Tariff** |
| Date:8/8/20 |
| **Aim:**    **Description:** Calculate the total bill amount for the given tariff.  **objectives Code:**  #include<stdio.h>  #include<iostream>  using namespace std;  int main()  {  int n,rupees;  float paise,tariff;  cout<<"Enter unit range between 1 and 500:";  cin>>n;  if((n>=1) and (n<=100))  {  rupees =1\*n;  paise=0.05\*n;  cout<<"Total Bill amount is:\t"<<rupees<<"\trupees"<<paise<<"\tpaise";  }  else if((n>=101) and (n<=300))  {  rupees=2\*n;  paise=35\*n;  cout<<"Total Bill amount is "<<rupees<<"\trupees\t"<<paise<<"\tpaise";  }  else if((n>=301) and (n<=500))  {  rupees=3\*n;  paise=50\*n;  cout<<"Total Bill amount is \t:"<<rupees<<"\trupees"<<paise<<"\tpaise";  }  else  {  rupees=4\*n;  paise=20\*n;  cout<<"Total Bill amount is \t"<<rupees<<"\trupees"<<paise<<"\tpaise";  }  }  **Sample Input:**    **Sample Output :**    **Video: URL :**  **Result:** Thus the program to calculate the electricity bill for the given tariff is executed and verified successfully. | |

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| Ex. No:5 | **Menu Driven Calculator** |
| Date:8/8/20 |
| **Aim:** To develop a menu driven calculator using +,-, /, %,\*.  **Description:** Develop a menu driven calculator using the concept of switch .  **Code**:  #include<stdio.h>  #include<iostream>  #include<conio.h>  using namespace std;  int main()  {  char i;  float a,b;  cout<<"Enter the operator +,-,/,%,\* \n";  cin>>i;  cout<<"Enter value of a and b";  cin>>a>>b;  switch(i)  {  case '+':  cout<<a+b;  break;  case '-':  cout<<a-b;  break;  case '/':  cout<<a/b;  break;  case '%':  cout<<int(a)%int(b);  break;  case '\*':  cout<<a\*b;  break;  default:  cout<<"No such operator exists in this calculator";  break;  }  return 0;  }  **Sample Input:**  **Sample Output:**    **Video:**  **Result:** Thus the program to develop a menu driven calculator is executed and verified successfully. | |