**Instructions: Please read carefully**

* Please rename this file as only your ID number **(e.g. 18-\*\*\*\*\*-1.doc or 18-\*\*\*\*\*-1.pdf).**
* Submit the file within the deadline in the Portal Lab Performance section labeled **Lab task 4. If you cannot complete the full task, do not worry. Just upload what you have completed.**

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| 1. Write C++ code to implement a stack and its operations. |
| **Your code here:**  #include <iostream>  using namespace std;  int stack[5], n = 5, toa = -1;  void push(int a) {  if(toa >= n-1)  cout<<"\n Stack Overflow\n"<<endl;  else {  toa++;  stack[toa] = a;  cout<<"The pushed element is : "<<stack[toa]<<endl;  }  }  void pop() {  if(toa <= -1)  cout<<"\nStack Underflow\n"<<endl;  else {  cout<<"The popped element is "<< stack[toa] <<endl;  toa--;  }  }  void display() {  if(toa>= 0) {  cout<<"Stack elements are:";  for(int i = toa; i>= 0; i--)  cout<<stack[i]<<" ";  cout<<endl;  } else  cout<<"Stack is empty";  }  int main() {  int a;  push(5);  push(3);  push(2);  push(1);  push(9);  push(7);  pop();  pop();  display();  cout<<endl<<"Value of index 4 is : "<<stack[4]<<endl;  return 0;  } |
| **Your whole Screenshot here: (Console Output):** |

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| 1. Write C++ code to implement a queue and its operations. |
| **Your code here:**  #include <iostream>  using namespace std;  int queue[5], n = 5, f = - 1, r = - 1;  void enqueue(int a) {  if(r >= n-1)  cout<<"\nQueue Overflow\n"<<endl;  else {  f=0;  r++;  queue[r] = a;  cout<<"Stack inserted in queue is : "<<queue[r]<<endl;  }  }  void dequeue() {  if (f == - 1 || f > r) {  cout<<"Queue Underflow ";  return ;  } else {  cout<<"Element deleted from queue is : "<< queue[f] <<endl;  f++;;  }  }  void Display() {  if (f == - 1)  cout<<"Queue is empty"<<endl;  else {  cout<<"Queue elements are : ";  for (int i = f; i <= r; i++)  cout<<queue[i]<<" ";  cout<<endl;  }  }  int main() {  int a;  enqueue(4);  enqueue(5);  enqueue(7);  enqueue(9);  enqueue(8);  enqueue(2);  dequeue();  dequeue();  Display();  return 0;  } |
| **Your whole Screenshot here: (Console Output):** |