

## LABORATORY WORK BOOK

Name of the Student: N. Ravi Chardika						Roll Number							
		CSD -B Semester.				2	3 .9	5	I	A	6	7 €	3 3
Nor	no of the	e: ACSDII Course Course Faculty MY F	· Sigran	<b>b</b>	ninin			Fa	culty	ID :.	IAR	= 106	52
Exe	rcise Nu	mber:6	Week	Number :	6i	·11(19)		D	ate :	39 -	10 -	202	<u> </u>
S. No.		EXERCISE NAME		(S AWARDED						f			
	Exercise Number		Aim/ Preparation	Algorithm / Procedure Performance in the Lab		Source Code Calculations and Graphs		Program Execution  Results and Error  Analysis		Vi V	Viva - Vọce	Total	
			4		4		and Graphs		4			4	20
1	6-1	.Linear queue	· -inf	Claikpar		i Fa	~ 1 s		.5	₩. A(-)	5 to 2	į	3 4
2	G-2	stack using queues	A STATE OF THE PARTY OF THE PAR	est en	11)4 <b>1</b> 5	4	oli	1 21	dъ	,			
3	6.3	Queue using stacks	) a	$\mathcal{N}$	2		4	57.02	4	<u> </u>		4	2
4	6.4	Circular Queue	T-		Kan :	1	nert	13.	111			y.	
5	6.5	Double ended queue			1							,	
6			COSSI	( frt) 51	and its	24			32 		76-1	,	
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11										4			
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Ravi Chandlika I Signature of the Student

Signature of the Faculty

## START WRITING FROM HERE

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tim: Linear queue is a dala structure that stores items in first in-First
6.1
    out manner. With a queue the heart succently added item will be
    removed lisst.
    Code:
     impost java-util- Scanna;
     public clas linear Queue &
        Static final ant MAX =5;
        state int[] queue = new tht [MAX];
        Static int pront = 0;
       static entreau co;
       public Static bodean (sempty() &
             oretrun front == Freat;
       public static boolean isfull() ?
            return reas == MAX;
        public Static void enqueue (int îtem) &
              11 (isful (>>) }
                   System. out printin l'aucue is tull. Connot enqueux + 9tem):
             4 else &
                queue [reart-1] = item;
                   Syllem-out · printin(" Enqueued: "+ "tem);
        public static void deque () }
            Pt (1sempty()) 9
                  System.out:potint in ("Queue 1s empty. Cannot deque.");
```

2/16

```
felse &
       System.out.println("Dequeued: "+queue(front);
      tront++
public static void main (string drays ?)) {
    Scanner scanner = new scanner (Syxtem.in);
                                     Pot charce;
    dos
        System-out-point en l'indueue operations: ");
        System-out-posinten (" 1. Enqueue");
        System-out porintlal"2. Dequeue");
        System. out. porinter ("3. Ofsplay");
                                                 July 1
        System-out-parintln ("4. Exit");
       System.out. print("enter you charce: ");
       choice = scanner. next2nt();
                                              nankeiti vie
       switch (choice) q
            System. out. print (" Enter an element to enqueue; ");
          case 1:
            int item = scanner-next2nt();
            enqueue Citem);
            break;
         care?
            dequeues; person to the little to he wish part will
           cose 3:
            displayer;
                                    Charle Ward British
            break;
                          3/16
```

```
case 4:
                                            System-out printen ("Exiting - ...");
                                          break;
                               dyant!:
                                              system.out.println1" analid choice. Please try again.");
                                                                                                                                       Ulik -Uganani S
        f while (Chrice]=4);
         Scanna-close ();
                                                                           a milit a manya sa Makabanja dan sejet
                                                                              The market I not they go writing!
  1.
                                                                                              Alignes of Madel (1982) of the property of the contract of the
                                                                              The thirty of the first of the state of
   Input:
     Queue Operations:
     1. Enqueue
     2- Dequeue
   8-Ofsplay
                                                                                                                                                       Get raylant or Lyng (Uppa)
   4 · Exit
  Enter your choice: 1
   Enter an element to enqueue: 23
  Output:
     Enqueued: 23.
film: Implement a LIFO stack wasing only two queues. The implem-
 -ented stalk should support all the functions of a normal stack.
 Code: Proposit Java-Will- Stack:
                          class Myananeg
```

```
portvate stack L'Integer > Stack 1;
     posivate stack 1 Integer > stack 1;
     public My Queuecs &
          Stack 1 = new Stack = 7 ();
          Stack 2 = new Stack < > ();
                           Carried to Fall State Control
    public void push (int x) {
        stack 1. push (m);
   7
   public int Popco 3
       ? ( Cstack 2 - is Empty ()) }
while ( | Stack 1. is Empty ()) }
Stacks.push (Stackl.popcs);
                                      · Situation is surjug
      Sieturn Stackz. Popc);
                          : 1273 be India Piur Lati Lagrai
                            Employed Proposition Designing
  public ent peerc) §
       il (stack 2. IsEmpty ()) }
                                      while (! Stack 1. is Empty()) {
            stackz. push(stack-popco));
                ENDER MAILEANN COMMERCIAL COM
     orduen stack 2 - pock(); fre his many brown and any
  public boolean empty() {
```

```
ordun Stacki-is Empty() & G stack 2-is empty();
    public static void main (string augs ()) }
       My Queue my Queue = new My Queucco;
       My Queuc. Push(1);
       My Queue Push (>);
      System-out-printer ("Peck: "+ my Queuc-peck());
         Peck: 1
                   Empty: Palse.
         Pop : 1
Output:
Aim: Implement a FIFO queue wing only two stacks- The
Emplemented queue should support all the functions of a
normal queue.
Code:
Emport java-util. Linkedlist;
import java. util. Queue;
class mystack {
    posivate Queue Motegas queue;
    public my stack () &
          queue=new Linkedlest < >C);
    public void puricint as 9
        queue. add cas:
        Pint Size = Queue- Size():
```

```
fool 101 7 = 0 ; 71 (971 - 1 ; 11+) 3
        queue add Caveur removers;
 public and bobio 3
      11 (empty(s) 7
         Sylum-out-println (" stock is undy - cornet pop.")
         orduin-1;
                                  go because her
   ordun queux · oremoves.);
public int topes &
                                     primera Parce
     16 (empty())§
       Bytem. out. polintin ("stock is emply.");
       oretour -1;
                     emports they of American I of accord
   ordun quere-peeko;
public boolean empty (). §
     return greve is compayer; and as in the
public static void main (string augs (1)) &
     my slock slock a new My Stock ();
     grock-publit;
                     the quete survival.
     Stact · push (2);
                         water and to hold and
     900x - pwh(3);
```

6.4

```
System-out-println (Top Eliment: "+Stack-tops);
                           Stack poper; I be the building the
                         Slack · pop();
                       System. out. println(") & stack empty?" + Stack empty().
                                                                                                                     indictionign or d
  Output:
         Top Element: 3
         Popped Element: 3
                                                                                        وزراويه ويستعيده ويحقاها
      Top Element after pop: 2
      Is stack empty ? False
       Is stack empty after popping all the climants? True.
Afin: A circular queue is an entended version of the normal
queue is connected to first element of the queue forming a
                                                                                                    forthood-unions within
Circle.
Code:
                                                                                     The section of the se
   class Circulas Queue $
                     private intsize, front, reas;
                      private Int[] queue;
                     Public Circuler Queue (int Size) &
                                    this. Size = Size;
                                   this · queuc = new int [size];
                                   this. Iront = this. rear = -1:
                                                                                                                            TO MAKE AND
               }
```

```
public void enqueue (int data) {
       if ((rea +1) / 812e = = /tont) &
         System. out. printin ("Queue is Fill");
                               I MAN COMPLETE COLOR HOLDER
      felx s
                            Carp appropriation of horses of the pro-
         lt (front == -1) $
                              Legisla disease with material
           front = 0;
              LOUIS A PORTE THAT HERE STATES
         real = Crear to / size;
        queux [rear] = data;
                              ika dikol bar, - nga dig
        System-out-println ("Enqueued: " + data
     ع
                             : (JE Hollan - mosts
  7.
                             rizon . adilfatt 60;
Output: man a prison who sups and and mount is
Enqueued: 10: Inmil Enqueued: 60
Enqueued: 20
                            Enqueued: 70
Enqueued: 30
                            Queue: 30 40 80 60 76.
Enquered: 40 montrolly some heting the artist
Enqueued: 50
Queue 1.10 20 30 40 50
Dequeued : 10
                                               August)
                                  (cho) s susumas
Dequeued: 20
                                    [100] : subsuper
Queue: 30 40 50
```

```
6.5 Aim: In a deque one can puform moset & delete operations
    from both and of a container.
    Code:
    import jova. util-Deque;
   Emport java. Wil-Array Deque;
   public class Deave &
         public static void main (string augs []) }
           eleque (2nteger) deque = new Array Deque (3).
           cleque add last(10);
                                deque.addlax(20):
           deaver addlast (30);
          dequi-addfirst(s);
          System-out-println l'Deque after adding elements: + cierce);
          System. out. println ("First element: " + cleque. peckfishe);
         deque remove firt();
         deque sumovelantes:
         System. out println ("Deque after removing currents: "tqueue);
   Output:
                                               A the hours on the
       Dequeue : (0,1,2)
                                              Pequeue: [0,1]
```

Deque: (0,1)

count of 1: 1

Front: 0

Back: 0

Deaue . [0,1,3,4,5]

Deque : [-1,-2,0,1,2,3,4,5]

Deaue: [4,5,-1,-2,0,1,3].