```
LAB-4-PROGRAM
28/10/2020
1) was to sometate the mostong of a wanted queue of ontegers wang
     an away.
    Pravide the following operations
  a) Insat
  b) Delete
    The program should part appropriate messages on grew empty
  c) Display
       and queue
     antifico undition.
 GOE:
   #andude < stdloin7
  # Onclude Lunto, hy
   It Enclude < stalks. Ly
  # define QUE_SIZE 5
   Out Stom, fuont 20, rear 21, q [QUE - SIZE], wunt= 0;
    unted Essettrear ()
     & Count == BUE_SIZE)
     pant (" queue duesflowin");
    return;
    Seas = (reas + 1).1. QUE - SIZE;
     q (rear Jz Etem;
      Count #+;
    Est delete front ()
     ef (count == 0) return - 1;
    Hem = 9 [fuont];
     front = (front +1)1. QUE_SIZE;
count = count +1;
```

```
wild display (SC)
 out E, f;
 & (went == 0)
 pearly ("queue Es enepty (nn).
 Retur;
front;
pront (" Contents of queue (nn);
for (t2 1; EZ = count; E++)
  peanty (".1.din", q [+]);
 f= (f+1) 1. QUE_SIZE;
Out magn ()
 Out droke;
for (5;)
 pront [ L' Ins: Orsertrear ma: delequont Ins: dieplay In4: extt In");
 printf ("enter the diate (n");
 Scanf ( "Y'd", Edhotce);
 Switch (choice)
  case 1: people ("enter the item to be asserted In");
   sconf 24.1.dn, flem);
   Inscrireas ();
    break;
  case &: Etem= delete fuont();
```

```
g (Etem==-1)

prantf [ a queue is empty in");

else

prantf (" Etem deleted = '/·din", Etem);

bueak;

case 3: display g();

clefault: exet (0);

y

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EXTER PROGRAMS
1) Durbre ended queue.
    Hondude Zstatio. LS
    # onclude < conto, hy
    # Induce 2 Stallis. hy
    # define quire 5
    Sut f20, 72-1, ch;
     out Etem, q[10];
     ant isfull)
       Setuen ( == qstre-1) ? 1:0;
     Entbernpty ()
    hold byet - real)
     if (is fue ())
        prant (" queue auestowinn);
        Return;
       72 r+1;
      q fr J= Etem;
     noted delete.
       of (Genipty())
         post ( a queue ompty 1m1);
         Return ;
```

```
pront ("them deleted & t.dln", q l(f) f+ J);
weed Ersert- quant ()
  & C f! = 0)
    f=f-1;
     9[f]28tem;
     Return ;
    9 [++ Cr] = Etem;
    Return;
   else
    punt (" Insertion not passible (nn);
    word delete - rear ()
       Ef (Es empty ())
        pront L" queue is enjoying,
        Letter;
```

```
posnty (" etem deleted & 1.d)n", q [(r) -- J);
     f 20;
wid display()
   Out &;
    of (samply ())
     prontf (" queue empty 1 nm);
      return;
    for ( 02 f; Eczr; 9++)
    pronf L4.1.din , q [E]);
  used mass ()
   for (;;)
     pront [" 1. Ensert - real ) n 2. Ensert - front In 3. delete - real 1 n 4.

delete - front In 5. display In 6. exit In n);

pront [" enter chatce In n);
       Scanf ( u.j.d m, &ch);
       Switch (d)
            case 1: pront ("enter the Etern(m");
                      sæmf ("1.d", & Etem);
onsert - rear();
                        break;
```

```
case 2: prontf [" enter the Etem\n");
          scang (" 1.d", & Etem);
           Ensert-front ();
           break;
   case 3: delete - real 1);
           break;
   case 4: delete-fuont();
             break;
    case 5: display ();
            break;
     default : Return ;
  getch();
Input Rosbroded program?
  # andwde = state. W
  # Enclude < wonto. hy
  # Enclude 2 stelleb. h7
  # define 9 soze 3
  Out f=0, r=-1,d;
   ont Stem, q Ciaz
    out sempty ()
     Seturn ( + 2 ) ? 1:0;
```

```
pronty l'aqueue averflow (nn);
Return;
12 r+1;
q [r]= Etem;
noted elelete-front ()
 { (Es empty())
    peantf ( queue empty Inn);
  return;
   prontf (" Frem deleted & 1.d In", q [(f)++]);
   noted delete_rear()
     of Cleryty (7)
      pronty ("queue & engety In");
      return;
```

```
pronty ( "Elem deteted is ) d in 19
   82-1;
wid display()
  S
  Out o;
  of (Genypty ())
   pronty C4 queue empty \n");
    Return;
   for (82f; k= r; E+t)
    pearty (4 1.d In, 9 (E));
   word main ()
    for (;;)
    pront ("1. disert-rea In 2. delete-rear In3. delete-fuont In4.
           Inb. exet (n");
    prontf ( " enter the choice In");
    Scanf ( " I'd", fch);
    Switch (ch)
     case 1: prontf L'enter the Hem | nm);
     scand (" 1 d", & Hem);
     Ensert - reael1;
     breat;
```

```
(ase 2: delete-real ();
      break;
     case 3: delete-funt();
     break;
      ease 4: desplay();
     break;
     default : exit(0);
   getch();
3
    autput Restrected Dequeue
    #onducle Zstatio, his
    # Onclude < Conto, hy
     # Ordwcle Z. Btdlb. hy
     # define gotte 3
      Out f=0, ~= 1, ch;
      out Etem, 9[10];
      ort esseul)
         letur (r== qstze-1)?1:0;
        ant isempty ()
          Setun (frr) ?1:0;
         noted orsert_lear()
         of (Esfau (7)
```

```
pront (" queue anesslow in");
   Letourn ;
 y
  72 T+1;
  q (r) 2 Etem;
  noid delete-fuont ()
  {
    (& empty ())
   pronty ("queue empty \n");
   Return;
  Y
  party (" etem deleted is . I.d In", q [(4)++));
  el (frr)
  82-1;
wild about fuont()
{ (f!20)
   {
f= f∓1;
   q CfJ 2 Etem;
   Return !
  else if ((f==0) & g (r==1))
   q(++(r) Jz&em;
```

```
retur;
else
pront [" orsertion not possible In");
used deplay ()
Out i;
of Compty(1)
  pront (" queue empty) n");
  letuun;
  for (12 f; EL = Y; E++)
 pantf ("",d In", q (E));
y
wold mass ()
  8
  for (;;)
  8
  pront ("1. ensert - rear InQ. orsert - front In3 delete - front
      In4. display Inb. extt Inn);
  pronty ("enter choice (n");
  scanf (4.1.d", fch);
  Switch ceh)
    'case 1: pront (" enter the item \n");
     scanf (".I.d", fitem);
     Ordert-Rease ();
     break;
```

```
Case 2: pront ("enter the term");

Scanf (".1.d1, 4 Eterm");

Orsert - front ();

break;

case 3: delete - front ();

break;

default = ext(0);

g

getch();
```