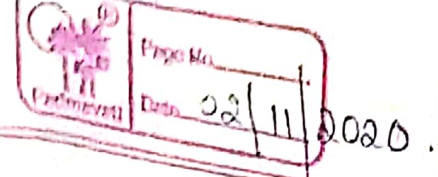


Priority queue



```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#define N 3
int queue[N][N];
int front[3] = {0, 0, 0};
int rear[3] = {-1, -1, -1};
int item, pr;

void main()
{
    int ch;
    while (1)
    {
        printf("Priority Queue\n");
        printf("****\n");
        printf("\n1. pinsert\n");
        printf("\n2. pdelete\n");
        printf("\n3. pdisplay\n");
        printf("\n4. Exit\n");
        printf("\nEnter the choice\n");
        scanf("%d", &ch);
        switch (ch)
        {
            case 1: printf("\nEnter the priority number\n");
                    scanf("%d", &pr);
                    if (pr > 0 && pr < 4)
                        pinsert(pr-1);
                    else
                        printf("\nOnly 3 priority queue exists 1, 2, 3\n");
```

```

        break;
    case 2: pqdelete();
        break;
    case 3: display();
        break;
    case 4: exist(0);
    }
    }
    pqinsert(intpr)
    {
        if (rear[pr] == N-1)
            printf("\n queue overflow\n");
        else
            printf("enter the item\n");
            scanf("%d", &item);
            rear[pr]++;
            queue[pr][rear[pr]] = item;
    }
    return 0;
}

pqdelete()
{
    int i;
    for (i = 0; i < 3; i++)
    {
        if (rear[i] == front[i]-1)
            printf("queue empty\n");
        else

```



```

printf ("deleted item is %d of queue %d\n",
        queue[i] front[i], i+1);
front[i]++;
return 0;
}
}
}

display()
{
int i, j;
for (i=0; i<3; i++)
{
if (rear[i] == front[i]-1)
printf ("queue empty\n", i+1);
else
{
printf ("%d\n", queue[i]);
for (j=front[i]; j<=rear[i]; j++)
printf ("%d\t", queue[i][j]);
}
}
return 0;
}

```

PRIORITY QUEUE

1:PQinsert

2:PQdelete

3:PQdisplay

4:Exit

enter the choice

1

enter the priority number

10

only 3 priority exists 1 2 3

PRIORITY QUEUE

1:PQinsert

2:PQdelete

3:PQdisplay

4:Exit

3:Pgdisplay

4:Exit

enter the choice

enter the priority number

enter the item

PRIORITY QUEUE

1:Pqinsert

2:Pqdelete

3:Pgdisplay

4:Exit

enter the choice

queue 1:20

queue empty 2

queue empty 3

1:PQinsert

2:PQdelete

3:PQdisplay

4:Exit

enter the choice

2

deleted item is 20 of queue 1

PRIORITY QUEUE

1:PQinsert

2:PQdelete

3:PQdisplay

4:Exit