

# Priority Queue

classmate

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```
#include <stdio.h>
#include <conio.h>
#define N 3
int queue[3][N];
int front[3] = {0, 0, 0};
int rear[3] = {-1, -1, -1};
int item, pr;
void main()
{
    int ch;
    clrscr();
    while (1)
    {
        printf("Priority Queue In");
        printf("***** In");
        printf("Init1: Pq insert In");
        printf("Init2: Pq delete In");
        printf("Init3: Pq display In");
        printf("Init4: Exit In");
        printf("In enter the choice In");
        scanf("%d", &ch);
        switch (ch)
        {
            Case 1: printf("In Enter the priority\nnumber In");
                    scanf("%d", &pr);
                    if (pr > 0 && pr < 4)
                        pqinsert(pr - 1);
                    else
                        printf("In only 3 priority\nexists 1 2 3 In");
                    break;
            Case 2: pqdelete();
                    break;
```

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    Case 3: display ();
             break;

```

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    Case 4: exit(0);

```

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}

```

```

}

```

```

getch();

```

```

}

```

```

pqinsert (int pr)

```

```

{

```

```

    if (rear [pr] == N-1)

```

```

        printf ("In Queue overflow\n");

```

```

    else

```

```

    {

```

```

        printf ("Enter the item\n");

```

```

        scanf ("%d", &item);

```

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        rear [pr] ++;

```

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        queue [pr] [rear [pr]] = item;

```

```

    }

```

```

    return ;

```

```

}

```

```

pqdelete ()

```

```

{

```

```

    int i;

```

```

    for (i=0; i<3; i++)

```

```

    {

```

```

        if (rear [i] == front [i] - 1)

```

```

            printf ("In Queue empty\n");

```

```

        else

```

```

        {

```

```

            printf ("deleted item is %d of\n", queue [i] [front [i]]);

```

```

            front [i] ++;

```

```

        }

```

```

    }

```

```

}

```

```

}

```

display()

{

int i, j;

for (i = 0; i < 3; i++)

{  
if (rear[i] == front[i] - 1)

printf("Queue is empty %d\n", i+1);

else

{

printf("In Queue %d:", i+1);

for (j = front[i]; j <= rear[i]; j++)

printf("%d\t", queue[i][j]);

}

}

return;

}