Priority Queue Implementation using Arrays

```c
#include <stdio.h>

#include <conio.h>

#define size 5

int queue[5][2] = {0};

int top = -1;

int bottom;

void push(int value, int pr)

{
int i,j,k;
if(top < size-1)
{
        if(queue[top][1] > pr)

        {
                for(i=0;i<top;i++)

                {

                if(queue[i][1] > pr)

                {

                break;

                }

                }

        }

        for(j=top;j>=i;j--)

        {

        queue[j+1][0] = queue[j][0];

        queue[j+1][1] = queue[j][1];
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            }

            top++;

            queue[i][0] = value;

            queue[i][1] = pr;

        }

        else

        {

                top++;

                queue[top][0] = value;

                queue[top][1] = pr;

        }

    }

    else

    {

        printf("queue overflow \n");

    }

}

void pop()

{

    int i;

    if(queue[0][0] == 0)

    {

        printf("\n The queue is empty  \n");
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}
else
{
printf("After , dequeue the following value is erased \n  %d \n", queue[0][0]);
for(i=0;i<top;i++)
{
queue[i][0] = queue[i+1][0];
queue[i][1] = queue[i+1][1];
}
queue[top][0] = 0;
queue[top][1] = 0;
top--;
}
}
void display()
{ int i,j;
printf("Element\tPriority \n");
for(i=size - 1;i>=0;i--)
{
for(j=0;j<2;j++)
{
printf(" %d\t",queue[i][j]);
}
```

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printf("\n");

}

}

int main()
{
int i,j, ch=0 ,value = 0,pr=0;
while(1)
{
printf("\n Please Enter the choice. \n");
printf("1 for Enqueue \n 2 for Dequeue \n 3 for display\n  5 for exit: \t \n");
scanf("%d",&ch);
switch(ch)
{
case 1:
printf("\n Please Enter the number to be inserted: \t ");
scanf("%d", &value);
printf("\n Please Enter the priority: \t ");
scanf("%d", &pr);
push(value,pr);
break;
case 2:
pop();
break;
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case 3:

display();

break;

case 5:

exit(0);

default:

printf("You entered wrong choice\n");

}

}

}
```