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Priority Queue

Program

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Semester 3: Data Structures

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Program

```c
#include <stdio.h>

void arrange(int x[ ],int n)
{
int i,t,pos,p;
for(i=1;i<n;i++)
{
        pos=i;
        do{
                p=(pos-1)/2;

                if(pos==0||x[p]>=x[pos]) break;

                t=x[pos];
                x[pos]=x[p];
                x[p]=t;

                pos=p;
        }while(1);
}
}


print(int x[ ],int n)
{
        int i;
        for(i=0;i<n;i++)
                printf("%d\t",x[i]);

                printf("\n");

}
```

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```
void main( )
{
        int choice, n=0,x[100],data;
        do{
                printf("\n\n");
                printf("1. Add data\n");
                printf("2. Remove Data\n");
                printf("3. Exit\n");
                printf("Enter choice");
                scanf("%d",&choice);

                if(choice==1)
                {
                        scanf("%d",&data);
                        if(n==100)    printf("Queue Full\n");
                        else
                        {       n=n+1;
                                x[n-1]=data;
                                arrange(x,n);
                                print(x,n);
                        }
                }


                if(choice==2)
                {
                        if(n==0)   printf("No data in Queue\n");
                        else
                        {       data=x[0];
                                printf("removed data %d\n",data);
                                x[0]=x[n-1];
                                n=n-1;
                                arrange(x,n);
                                print(x,n);
                        }
                }
        }while (choice!=3);
}
```