Assignment No:- 2.1
Assignment Name:- Program for creating max/min heap using ADJUST/HEAPIFY
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```
//Create MAX Heap using ADJUST/HEAPIFY.
#include <iostream.h>
#include <conio.h>
class HEAP_MAX
{
        private:
                int*A,n;
        public:
                HEAP_MAX(int size);
                void READ();
                void ADJUST(int value, int n);
                void HEAPIFY();
                void DISPLAY();

};
HEAP_MAX :: HEAP_MAX(int size)
{
        n = size;
        A= new int[n+1];
}
void HEAP_MAX :: READ()
{
        for(int i=1; i<=n; i++)
        {
                cin>>A[i];
        }
}
void HEAP_MAX :: ADJUST(int value, int n)
{
        int j, item;
        j = 2*value;
        item = A[value];
        while(j<=n)
        {
                if(j < n && A[j] < A[j+1])
                {
                        j = j + 1;
                }
                if(item>A[j])
                        break;
                else
                        A[j/2] = A[j];
                j = 2*j;
        }
```

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        A[j/2] = item;
}
void HEAP_MAX :: HEAPIFY()
{
        for(int i= n/2; i>=1; i--)
        {
                ADJUST(i,n);
        }
}
void HEAP_MAX :: DISPLAY()
{
        for(int i=1; i<=n; i++)
        {
                cout<<A[i]<<" ";
        }
}
void main()
{
        clrscr();
        int size;
        cout<<"Enter the size of list: ";
        cin>>size;
        HEAP_MAX obj(size);

        obj.READ();
        cout<<"\nYou Entered Elements are: ";
        obj.DISPLAY();
        obj.HEAPIFY();
        cout<<"\nElements after Creating MAX_HEAP: ";
        obj.DISPLAY();
        getch();
}
```