

**Assignment No:- 1.1****Assignment Name:- Program for creating max/min heap using INSERT****Name:-Sagar Madan Saitwal****Roll No:-113**

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*//INSERT MAX*

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#include <iostream.h>
#include <conio.h>
class INSERT_MAX
{
    private:
        int*A,n;
    public:
        INSERT_MAX(int size);
        void READ();
        void INSERT(int);
        void CREATE_HEAP();
        void DISPLAY();
};
INSERT_MAX :: INSERT_MAX(int size)
{
    n = size;
    A= new int[n+1];
}
void INSERT_MAX :: READ()
{
    for(int i=1; i<=n; i++)
    {
        cin>>A[i];
    }
}
void INSERT_MAX :: INSERT(int node)
{
    int j, i, item;
    j = node; i= node/2; item = A[node];
    while(i > 0 && A[i] < item)
    {
        A[j] = A[i];
        j=i;
        i=i/2;
    }
    A[j] = item;
}
void INSERT_MAX :: CREATE_HEAP()
{
    for(int i= 2; i<=n; i++)
    {
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        INSERT(i);
    }
}
void INSERT_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;
    INSERT_MAX heap(size);

    heap.READ();
    cout<<"\nYou Entered Elements are: ";
    heap.DISPLAY();

    heap.CREATE_HEAP();
    cout<<"\nElements after Creating MAX_HEAP: ";
    heap.DISPLAY();
    getch();
}

```