

Solution #1

```
include <iostream>
```

```
using namespace std;
```

```
void printSorted(int arr[], int start, int end)
```

```
{
```

```
    if(start > end)
```

```
        return;
```

```
    printSorted(arr, start*2 + 1, end);
```

```
    cout << arr[start] << " ";
```

```
    printSorted(arr, start*2 + 2, end);
```

```
}
```

```
int minValue(struct node* node)
```

```
{
```

```
    struct node* current = node;
```

```
    while (current->left != NULL)
```

```
{
```

```
        current = current->left;
```

```
}
```

```
return(current->data);  
}
```

```
int main()  
{  
    int arr[] = {4, 2, 5, 1, 3};  
    int arr_size = sizeof(arr)/sizeof(int);  
    printSorted(arr, 0, arr_size-1);  
    getchar();
```

```
    struct node* root = NULL;  
    root = insert(root, 4);  
    insert(root, 2);  
    insert(root, 5);  
    insert(root, 1);  
    insert(root, 3);
```

```
    cout << "\n Minimum value in BST is " << minValue(root);  
    getchar();
```

```
    return 0;
```

```
    return 0;  
}
```

Solution #2

```
#include <iostream>
```

```
#include <bits/stdc++.h>
```

```
using namespace std;
```

```
bool isPalindromeRec(char str[], int a, int b)
```

```
{
```

```
    if (a == b)
```

```
    {
```

```
        return true;
```

```
    }
```

```
    if (str[a] != str[b])
```

```
    {
```

```
        return false;
```

```
    }
```

```
    if (a < b+1)
```

```
    {
```

```
        return isPalindromeRec(str, a+1, b-1);
```

```
    }
```

```
    return true;
```

```
}
```

```

bool isPalindrome(char str[])
{
    int n = strlen(str);

    if (n == 0)
    {
        return true;
    }

    return isPalindromeRec(str, 0, n-1);
}

int main()
{
    char str[] = "racecar";
    if (isPalindrome(str))
    {
        cout<<"Given input string is palindrome"<<endl;;
    }
    else
    {
        cout<<"Input string is not palindrome"<<endl;
    }
    return 0;
}

```

Solution #3

```

#include <iostream>

#include "unsortedtype.h"

#include "unsortedtype.cpp"


bool checkPallindrome()

{
    UnsortedType<char> p,q;
    char temp;
    for(int i=0 ; i < 5; i++){
        cin>>temp;
        p.InsertItem(temp);
    }
    for(int i=0; i < p.LengthIs(); i++){
        p.GetNextItem(temp);
        q.InsertItem(temp);
    }
    p.ResetList();
    char m,n;
    for(int i=0; i < q.LengthIs(); i++){

        p.GetNextItem(m);
        q.GetNextItem(n);
        if(m!=n) return false;
    }
    return true;
}


int main(){

```

```
if(checkPallindrome())  
  
    cout<<"character sequence is pallindrome."<<endl;  
else  
  
    cout<<"Not pallindrome"<<endl;  
}
```