Assignment Solutions | Strings - 1 | Week 7

1. Input a string of size n and update all the odd positions in the string to character '#'. Consider 0-based indexing.

   Input : str = "Pbwcshkuiglhlds"

   Output : "P#w#s#k#i#l#l#s"

   input : str = "a"

   Output : "a"

Solution :

```
#include <bits/stdc++.h>
using namespace std;
int main() {
    int n;
    cin >> n;
    string s;
    cin >> s;

    for (int i = 1; i < (int)s.size(); i += 2) {
        s[i] = '#';
     }
    cout << s;
}
```

2. Input a string of length n and count all the consonants in the given string.

   Input : "pwians"

   Output : 4

   Input : "abdc"

   Output : 3

Solution :

```
#include <bits/stdc++.h>
using namespace std;
int main() {
    int n;
    cin >> n;
    string s;
    cin >> s;

    int c = 0;
    for (int i = 0; i < (int)s.size(); i ++) {
        if (s[i] == 'a' || s[i] == 'e' || s[i] == 'o' || s[i] == 'u' || s[i] == 'i')
{
            c++;
        }
    }
    cout << n - c;
}
```

3. Check whether the given string is palindrome or not.

   Input : "abcde"

   Output : No

   Input : "abcdcba"

   Output : Yes

Solution :

```
#include <bits/stdc++.h>
using namespace std;

bool check(string &s) {
    int i = 0, j = (int)s.size() - 1;
    while (i <= j) {
        if (s[i] != s[j]) return false;
        i++, j--;
    }
}

int main() {
    int n;
    cin >> n;
    string s;
    cin >> s;

    cout << (check(s) ? "YES" : "NO");

}
```

4. Input a string of even length and reverse the second half of the string.

   Input : str = "abcdefgh"

Output : abcdhgfe

Input :str = "pwians"

Output : pwisna

Solution :

```
#include <bits/stdc++.h>
using namespace std;

int main() {
    int n;
    cin >> n;
    string s;
    cin >> s;
     if(s.size()%2 != 0) cout<<"Invalid input."<<endl;
  else{
       reverse(s.begin() + n / 2, s.end());
       cout << s;
      }
}
```

5. Input a string of length less than 10 and convert it into integer without using builtin function.

   Input : "3244"

   Output : 3244

   Input : "12"

   Output : 12

Solution :

```
#include <bits/stdc++.h>
using namespace std;
int main() {
    string s;
    cin >> s;
    int val = 0, pw = 1;
    while (s.size()) {
        val += pw * (s.back() - '0');
        s.pop_back();
        pw *= 10;
    }
    cout << val;
}
```
