## Program:

```
#include <bits/stdc++.h>
using namespace std;
int main()
{
    vector<int> ans;
    vector<int> barker = {1, 0, 1, 1, 0, 1, 1, 0, 0, 0};
    cout << "Enter Input String: ";</pre>
    string n;
    cin >> n;
    vector<int> encrypt;
    for (int i = 0; i < n.size(); i++)
    {
        for (int j = 0; j < 11; j++)
        {
             encrypt.push_back((n[i] - '0') ^ barker[j]);
        }
    }
    cout << "\nEncrypt signal: ";</pre>
    for (auto i : encrypt)
        cout << i;</pre>
    string op = "";
    int cnt = 0;
    for (int i = 0; i < encrypt.size(); i = i + 11)</pre>
    {
        cnt = 0;
        for (int j = 0; j < 11; j++)
             if (encrypt[i + j] ^ barker[j])
                 cnt++;
        }
        op += cnt < 4 ? '0' : '1';
    cout << "\n\nDecrpt signal: ";</pre>
    cout << op;</pre>
}
```

## **Output:**