Experiment No: 3

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Program:

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#include<bits/stdc++.h>
using namespace std;
void characterCount()
{
   int n, a[100], j = 0, k, end_f, start_f = 0;
   string str;
   cout << "Enter the string data:";
   cin >> str;
   n = str.length();
   for (int i = 0;i < n;i++)
   {
      a[i] = int(str[i]) - 48;
   }
   int i = 0, f_count = 0;
   end_f = a[0];
   while (i < n)
   {
      f_count++;
      cout << "The " << f_count << " frame contain " << a[j] << " char:" << endl;
      for (j = start_f;j < end_f;j++)
      {
         cout << a[j] << " ";
      }
      cout << endl;
      start_f = j;
      end_f = end_f + a[start_f];
      i = start_f;
   }
}

void bitStuffing()
{
   string s;
   cin >> s;
   string stuffed = "0111110 ";
         int count = 0;
         for(int i = 0; i < s.size(); i++)
         {
                  stuffed += s[i];
                  if(s[i] == '1')
                  {
                           count++;
                  }
```

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                else
                {
                        count = 0;
                }
                if(count == 5)
                {
                        stuffed += '0';
                        count = 0;
                }
        }
        stuffed += " 0111110";
        cout<<stuffed<<endl;
}

int main()
{
   int ch = 0;
   cout << "Aniket Tiwari\n" << endl;
   do
   {
      cout << "1.Character count \n2.bitstuffing \n3.Character stuffing\nEnter choice : ";
      cin >> ch;
      switch (ch)
      {
      case 1:
      {
         characterCount();
         break;
      }
      case 2:
         bitStuffing();
         break;
      case 3:
      {
         char a[30], b[4] = "dle";
         int count = 0, n, p, i;
         cin.ignore();
         cout << "Enter the frame to be sent : ";
         cin.getline(a, 30);
         n = strlen(a);
         cout << "Length of frame is : " << n << endl;
         cout << "dlestx";
         for (int i = 0; i < n; i++)
         {
            count = 0;
            for (int j = 0; j < 3; j++)
            {
               if (a[i] == b[j])
               {
                  count++;
                  i++;
```
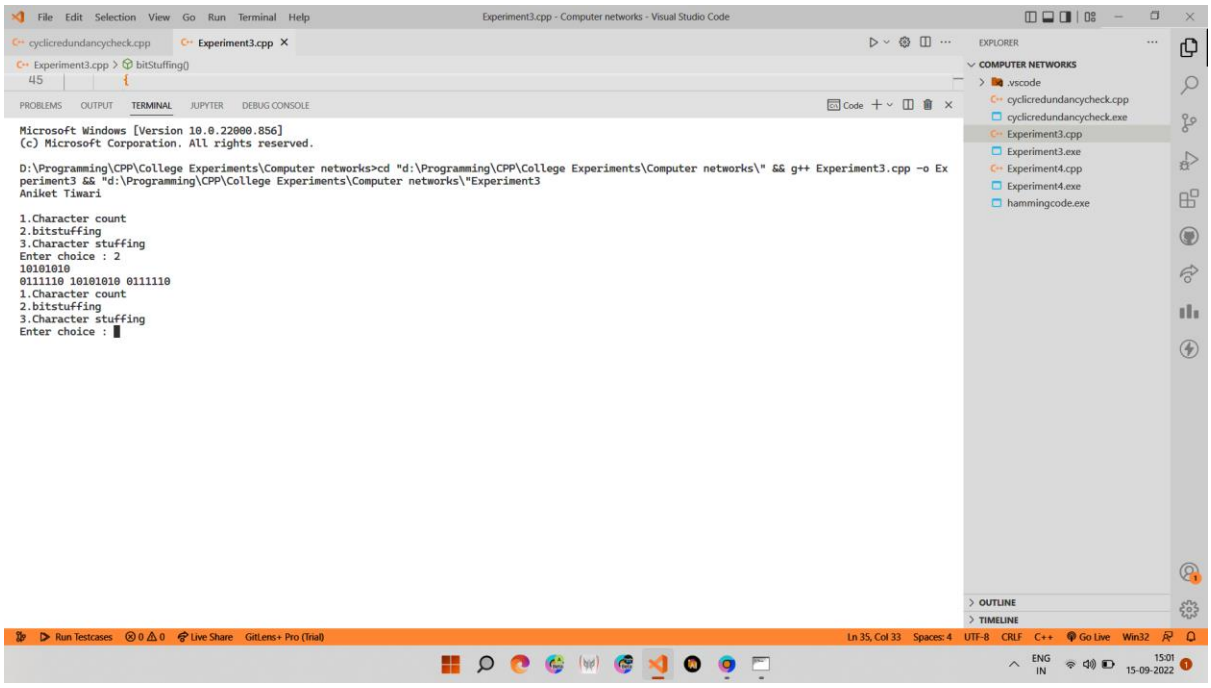

```
            }
        }

        if (count == 3)
            cout << "dledle";
        else
            cout << a[i];
    }
    cout << a[(n + 2) - count - i]
        ; cout << "dleetx\n";
    break;
  }
  }
 } while (ch < 4);
 return 0;
}
```

Output:



Character count