

~\OneDrive\Desktop\p1.c++

```
1
2 #include<iostream>
3 #include<cmath>
4 #include<iomanip>
5 #include<time.h>
6 using namespace std;
7 int main(){
8     //26
9     int i=2,n,f=0;
10    cout <<"Enter the number of prime numbers you want: ";
11    cin>>n;
12    int arr[n];
13    int count=0;
14    while(count<n){
15        f=0;
16        for(int j=2;j*j<=i;j++) {
17            if (i%j==0) {
18                f=1;
19                break;
20            }
21        }
22        if(f==0){
23            arr[count++] = i;
24        }
25        i++;
26    }
27    cout <<"First "<<n<<" prime numbers are: ";
28    for (int j = 0; j < n; j++) {
29        cout<<arr[j]<<" ";
30    }
31    //27
32    int r;
33    cout<<"enter the range:"<<endl;
34    cin>>r;
35    for(int i=1;i<r;i++){
36        int c=0,temp=i;
37        while(temp!=0){
38            temp=temp/10;
39            c++;
40        }
41        int num=i,sum=0;
42        while(num!=0){
43            int digit=num%10;
44            num=num/10;
45            sum+=pow(digit,c);
46        }
47        if(sum==i){
48            cout<<i<<" ";
```

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49     }
50 }
51 //28
52 int n1,n2;
53 srand(time(0));
54 cout<<"you have to guess a number lies between 1 and 20"<<endl;
55 cout<<"you have only 4 attempts"<<endl;
56 for(int i=4;i>0;i--){
57     cout<<"your attempt "<<i<<endl;
58     cout<<"enter your guess number:"<<endl;
59     cin>>n1;
60     n2=rand()%20;
61     if(n1==n2){
62         cout<<"your guess is correct"<<endl;
63         break;
64     }
65     else{
66         cout<<"sorry! your guess is incorrect"<<endl;
67         cout<<"the number is "<<n2<<endl;
68     }
69 }
70 //29
71 for(int i=50;i<=70;i++){
72     if(i%7==0){
73         cout<<i;
74         break;
75     }
76 }
77 //30
78 int sum=0;
79 for(int i=0;i<500;i++){
80     if((i%3==0)|| (i%7==0)){
81         continue;
82     }
83     sum+=i;
84     cout<<i<<" ";
85     if(sum>1000){
86         break;
87     }
88 }
89 //31
90 int num,c=0,f=0;
91 cout<<"enter the number:"<<endl;
92 cin>>num;
93 int on=num,r[10];
94 while(num!=0){
95     num=num/10;
96     c++;
97 }
98 for(int i=0;i<c;i++){
```

```
99         r[c-i]=on%10;
100     }
101     int a[c],i=0;
102     while(on!=0){
103         a[i]=on%10;
104         on=on/10;
105         i++;
106     }
107     for(int i=0;i<c;i++){
108         if(r[i]==a[i]){
109             f=1;
110         }
111         else{
112             break;
113         }
114     }
115     if(f==1){
116         cout<<"number is palindrome";
117     }
118     else{
119         cout<<"the reverse of the number is"<<endl;
120         for(int i=0;i<c;i++){
121             cout<<a[i];
122         }
123     }
124     //32
125     int n;
126     cout<<"enter the number of integers in an array:"<<endl;
127     cin>>n;
128     int arr[n],a;
129     for(int i=0;i<n;i++){
130         cout<<"enter element at position "<<i+1<<endl;
131         cin>>arr[i];
132     }
133     for(int i=0;i<n;i++){
134         for(int j=i+1;j<n;j++){
135             if(arr[i]>arr[j]){
136                 a=arr[i];
137                 arr[i]=arr[j];
138                 arr[j]=a;
139             }
140         }
141     }
142     cout<<"2 largest element is "<<arr[n-2]<<endl;*/
143     //33
144     double num;
145     cout << "Enter a floating-point number: ";
146     cin >> num;
147
148     double fraction = num - (int)num;
```

```
149
150     while (fraction > 0) {
151         fraction *= 2;
152         if (fraction >= 1) {
153             fraction -= 1;
154         }
155         if (fraction == 0) {
156             cout << "The number can be exactly represented in binary.\n";
157             return 0;
158         }
159     }
160
161     cout << "The number cannot be exactly represented in binary.\n";
162     return 0;
163     //34
164     int rows,cols;
165     cout<<"enter the no rows and columns in array:"<<endl;
166     cin>>rows>>cols;
167     int a[rows][cols];
168     for(int i=0;i<rows;i++){
169         for(int j=0;j<cols;j++){
170             cout<<"enter the element at "<<i+1<<j+1<<":"<<endl;
171             cin>>a[i][j];
172         }
173     }
174     for(int i=0;i<rows;i++){
175         for(int j=0;j<cols;j++){
176             cout<<setw(5)<<a[i][j]<<" ";
177         }
178         cout<<endl;
179     }
180     //35
181     int a,b,r=1,i=2;
182     cout<<"enter the two integers:"<<endl;
183     cin>>a>>b;
184     int oa=a,ob=b;
185     while(a!=1||b!=1){
186         if(a%i==0 && b%i==0){
187             r*=i;
188             a/=i;
189             b/=i;
190         }
191
192         else if(a%i==0){
193             r*=i;
194             a/=i;
195         }
196         else if(b%i==0){
197             r*=i;
198             b/=i;
```

```
199         }
200         else{
201             i++;
202         }
203     }
204
205     cout<<"LCM:"<<r<<endl;
206     cout<<"HCF:"<<(oa*ob)/r<<endl;
207
208
209
210
211
212
213
214 }
```