~\OneDrive\Desktop\p1.c++

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#include<iostream>
#include <iomanip>
#include<cmath>
using namespace std;
int main(){
//16
int a,b;
cin>>a>>b;
bool r=(a^b)<0;
if(r==1){
    cout<<"oppsite sign"<<endl;
}
else{
    cout<<"same sign"<<endl;
}
//17
float a,b,r=0,c=0;
cin>>a>>b;
while(r>=b){
    r=a-b;
    c++;
}
cout<<c<<endl;
//18
int num;
cin>>num;
int r1=num>>1;
int r2=num<<2;
cout<<"right shift:"<<r1<<endl;
cout<<"left shift:"<<r2<<endl;
//19
int marks[5];
cout<<"enter marks for 5 subjects:"<<endl;
for(int i=0;i<5;i++){
    cout<<"enter marks for subject "<<i+1<<endl;
    cin>>marks[i];
}
int sum=0;
for(int i=0;i<5;i++){
    sum+=marks[i];
}
if(sum>=90){
    cout<<"A grade"<<endl;
}
else if(sum>=70){
    cout<<"B grade"<<endl;
}
else if(sum>=60){
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    cout<<"C grade"<<endl;
}
else if(sum>=50){
    cout<<"D grade"<<endl;
}
else{
    cout<<"fail"<<endl;
}
//20
int c;
float a,b;
do{
 cout<<"The following are the choices for calculating the values"<<endl;
 cout<<"(1)ADDITION\n(2)SUBTRACTION\n(3)MULTIPLICATION\n(4)DIVISION\n(4)EXIT"<<endl;
 cout<<"enter 2 numbers:"<<endl;
 cin>>a>>b;
 cout<<"enter your choice:"<<endl;
 cin>>c;
  switch(c){
     case 1:cout<<"Addition is:"<<a+b<<endl;
     break;
     case 2:cout<<"Subtraction is:"<<a-b<<endl;
     break;
     case 3:cout<<"Multiplication is:"<<a*b<<endl;
     break;
     case 4:cout<<"Division is:"<<a/b<<endl;
     break;
     case 5:exit(0);
     break;
     default:cout<<"invalid choice"<<endl;
     break;
    }
}while(c!=5);
//21
int y;
cout<<"enter the year to check if the year is leap year or not:"<<endl;
cin>>y;
if((y%4==0&&y%100!=0)||y%400==0){
    cout<<"year is leap year"<<endl;
}
else{
    cout<<"the year is not the leap year"<<endl;
}
//22
int n;
cout<<"enter the number of numbers to be in fibonacci series:"<<endl;
cin>>n;
int arr[n];
arr[0]=1;
arr[1]=1;
```

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for(int i=2;i<n;i++){
    arr[i]=arr[i-1]+arr[i-2];
}
for(int i=0;i<n;i++){
    cout<<arr[i]<<" ";
}
//23
int n,i=2,flag=0;
cout<<"Enter a positive integer value: ";
cin>>n;
while(i<=sqrt(n)){
if(n%i==0){
  flag=1;
  break;
}
 i++;
}
 (flag==0)
    cout<<n<<" is a prime number.";
else
    cout<<n<<" is not a prime number.";
//24
int num, fact = 1, i;
cout << "Enter a number: ";
cin >> num;
i = num;
do{
  if(i>0){
     fact*=i;
   }
    i--;
}
while(i>0);
cout << "Factorial of " << num << " is: " << fact << endl;
//25
int n;
cout<<"enter the length of array:"<<endl;
cin>>n;
int arr[n];
int sum=0;
for(int i=0;i<n;i++){
    cout<<"enter element "<<i+1<<endl;
    cin>>arr[i];
}
for(int i=0;i<n;i++){
    sum+=arr[i];
}
int max=arr[0],min=arr[0];
for(int i=0;i<n;i++){
    if(max<arr[i]){
```

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149         max=arr[i];
150     }
151 }
152 for(int i=0;i<n;i++){
153     if(min>arr[i]){
154         min=arr[i];
155     }
156 }
157 cout<<"sum is "<<sum<<endl;
158 cout<<"max is "<<max<<endl;
159 cout<<"min is "<<min<<endl;
160 }
161
```