
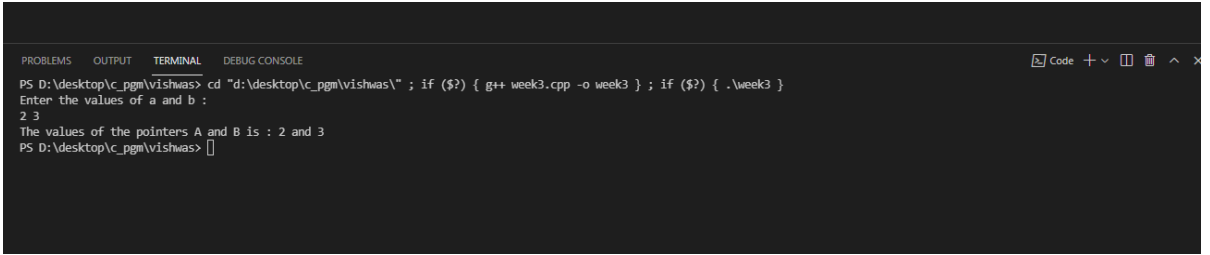
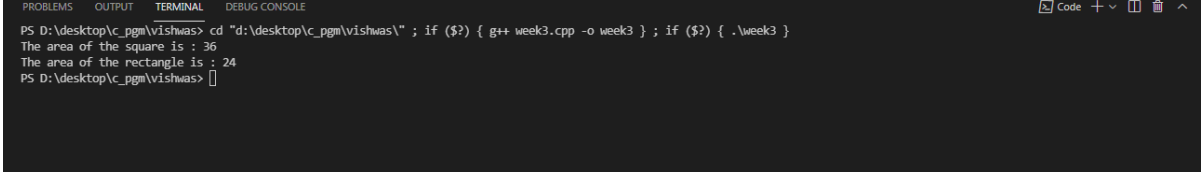


Name: Vishwas M	SRN: PES2UG20CS390	Section: F
	Date:15-09-2021	Week Number:2

1	Write a C++ program that will display the calculator menu.
	<p><b>Program:</b></p> <pre>#include&lt;iostream&gt; using namespace std;  int main() {     cout&lt;&lt;"1.Add"&lt;&lt;endl&lt;&lt;"2.Subtract"&lt;&lt;endl&lt;&lt;"3.Multiply"&lt;&lt;endl&lt;&lt;"4.Divide";     return 0; }</pre>
	<p><b>Output Screenshot:</b></p> 
2	Write a Program that asks the user to enter integers as inputs to be stored in the variables 'a' and 'b' respectively .There are also two integer pointers named ptrA and ptrB .Assign the values of 'a' and 'b' to ptr A and ptr B respectively, and display them.
	<p><b>Program:</b></p> <pre>#include&lt;iostream&gt; using namespace std;  int main() {     int a,b;     cout&lt;&lt;"Enter the values of a and b : "&lt;&lt;endl;     cin&gt;&gt;a&gt;&gt;b;     int *A = &amp;a,*B = &amp;b;     cout&lt;&lt;"The values of the pointers A and B is : "&lt;&lt;*A&lt;&lt;" and "&lt;&lt;*B;     return 0; }</pre>

	<pre>} </pre>
	<p><b>Output Screenshot:</b></p> 
3	<p>Explain the concept of function overloading with help of an example.</p>
	<p><b>Program:</b></p> <pre> #include&lt;iostream&gt; using namespace std;  class Alpha {     public :     int area(int a)     {         return a*a;     }      int area(int l,int b)     {         return l*b;     } };  int main() {     Alpha a;     cout&lt;&lt;"The area of the square is : "&lt;&lt;a.area(5)&lt;&lt;endl;     cout&lt;&lt;"The area of the rectangle is : "&lt;&lt;a.area(5,4)&lt;&lt;endl;     return 0; } </pre>
	<p><b>Output Screenshot:</b></p>

	
4	<p>Write a program that asks 3 users to enter their age as inputs to be stored in the variables 'a', 'b','c'. Later assign the age of a to b, b to c and c to a. Perform this program with the help of call by reference, call by pointer and call by value.</p>
	<p><b>Program:</b></p> <pre>#include&lt;iostream&gt; using namespace std;  void alpha(int &amp;x, int &amp;y, int &amp;z) {     int temp;     temp = x;     x = y;     y = z;     z = temp; }  void beta(int *x, int *y, int *z) {     int temp;     temp = *x;     *x = *y;     *y = *z;     *z = temp; }  void gamma(int x, int y, int z) {     int temp = x;     x = y;     y = z;     z = temp; }</pre>

```
int main ()
{
    int a,b,c;

    cout<<"Enter the age of person 1: ";
    cin>>a;
    cout<<"Enter the age of person 2: ";
    cin>>b;
    cout<<"Enter the age of person 3: ";
    cin>>c;

    cout << "Before swap, age of person 1: " << a << endl;
    cout << "Before swap, age of person 2: " << b << endl;
    cout << "Before swap, age of person 3: " << c << endl<<endl;

    alpha(a,b,c);

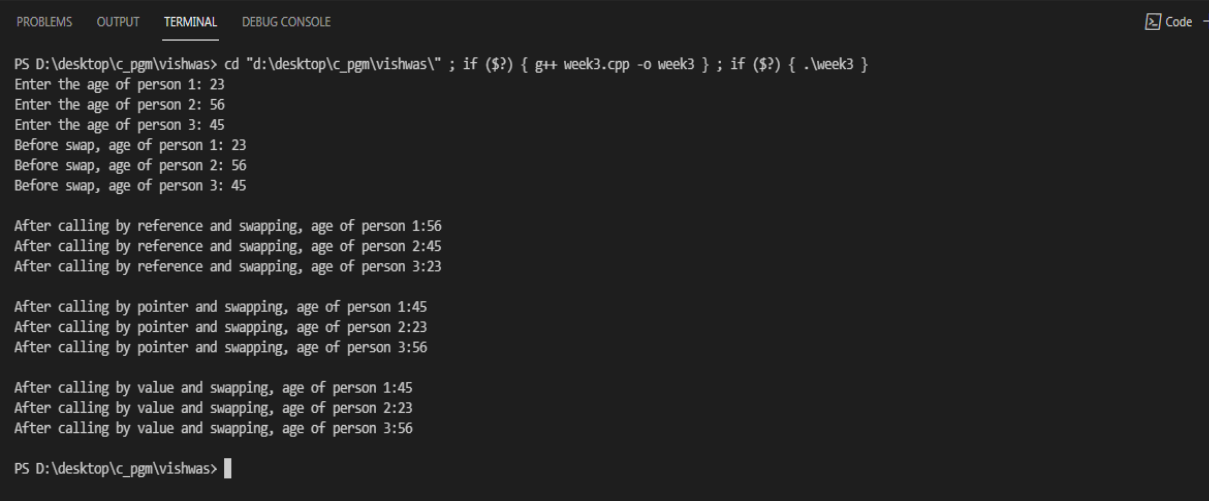
    cout << "After calling by reference and swapping, age of person 1:" << a
<< endl;
    cout << "After calling by reference and swapping, age of person 2:" << b
<< endl;
    cout << "After calling by reference and swapping, age of person 3:" << c
<< endl<<endl;

    beta(&a,&b,&c);

    cout << "After calling by pointer and swapping, age of person 1:" << a <<
endl;
    cout << "After calling by pointer and swapping, age of person 2:" << b <<
endl;
    cout << "After calling by pointer and swapping, age of person 3:" << c <<
endl<<endl;





    gamma(a,b,c);

    cout << "After calling by value and swapping, age of person 1:" << a << e
ndl;
    cout << "After calling by value and swapping, age of person 2:" << b << e
ndl;
    cout << "After calling by value and swapping, age of person 3:" << c << e
ndl<<endl;
```

	<pre>return 0; }</pre>
	<p><b>Output Screenshot:</b></p>  <pre> PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE  [?] Code PS D:\desktop\c_pgm\wishwas&gt; cd "d:\desktop\c_pgm\wishwas\" ; if (\$?) { g++ week3.cpp -o week3 } ; if (\$?) { .\week3 } Enter the age of person 1: 23 Enter the age of person 2: 56 Enter the age of person 3: 45 Before swap, age of person 1: 23 Before swap, age of person 2: 56 Before swap, age of person 3: 45  After calling by reference and swapping, age of person 1:56 After calling by reference and swapping, age of person 2:45 After calling by reference and swapping, age of person 3:23  After calling by pointer and swapping, age of person 1:45 After calling by pointer and swapping, age of person 2:23 After calling by pointer and swapping, age of person 3:56  After calling by value and swapping, age of person 1:45 After calling by value and swapping, age of person 2:23 After calling by value and swapping, age of person 3:56  PS D:\desktop\c_pgm\wishwas&gt; </pre>

5	<p><b>Write a program that asks for two numbers, compare them and show the maximum. Declare function called max_two that compares the numbers and returns the maximum.</b></p>
	<p><b>Program:</b></p> <pre> #include&lt;iostream&gt; using namespace std;  int max_two(int a,int b) {     if(a&gt;b)         return a;     else         return b; }  int main() { </pre>

```
int a,b;  
cout<<"Enter the values of a and b : "<<endl;  
cin>>a>>b;  
cout<<"The maximum of the two numbers is : "<<max_two(a,b);  
return 0;  
}
```

**Output Screenshot:**PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE Code    X

```
PS D:\desktop\c_pgm\vishwas> cd "d:\desktop\c_pgm\vishwas\" ; if ($?) { g++ week3.cpp -o week3 } ; if ($?) { .\week3 }  
Enter the values of a and b :  
45 54  
The maximum of the two numbers is : 54  
PS D:\desktop\c_pgm\vishwas> |
```