Debug the following programs -

1. app.cpp (discussed in the class)

2. demo.cpp

3. pplpie.cpp

4. cinget.cpp

5. degree.cpp

6. strlength.cpp

1. app.cpp

#include<iostream>

using namespace std;

void func3() {

int fun3variable = 25;

cout << fun3variable << endl;

}

void func2() {

int fun2variable = 20;

cout << fun2variable << endl;

func3();

}

void func1() {

int fun1variable = 15;

cout << fun1variable << endl;

func2();

}

int main() {

int mainvariable = 10;

cout << mainvariable << endl;

func1();

return 0;

}

Debug to differentiate between s and n commands.

Debug incorporating the new commands discussed in the class.

Save the history of the commands in a temporary file.

2. demo.cpp

/\*Debug this normally with all basic commands\*/

#include<iostream>

using namespace std;

int func(int);

const int X = 5;

int main(){

cout << "Program is starting.\n";

int result;

int X = 10;

cout << "In the middle of the program.\n";

result = func(X);

cout << "The result is " << result << ".\n";

}

int func(int y){

int answer;

cout << "In the function.\n";

answer = y;

answer += X;

int X = 20;

cout << "In the middle of the function.\n";

answer += X;

cout << "The function is exiting.\n";

return answer;

}

3. pplpie.cpp

/\* The intention of this program is to divide 14 pies evenly between 3 people, so each one should get 4 2/3 pies, but why does the output say each person gets only 4 pies? \*/

#include<iostream>

using namespace std;

int main() {

double result;

int numOfPies, numOfPeople;

numOfPies = 14;

numOfPeople = 3;

result = numOfPies/numOfPeople;

cout<<numOfPies<<" pies split up evenly between "<<numOfPeople<<" people.\n";

cout<<"Therefore, each person gets "<<result<<" pies.\n";

return 0;

}

4. cinget.cpp

/\* The following program is supposed to receive two characters from user but contains a subtle bug. Point it out and correct it.\*/

#include<iostream>

using namespace std;

int main(int argc, char\* argv[]) {

int i;

char c,c2;

cout<<"Please enter your favorite character: ";

cin.get(c);

cout<<"Please enter your second favorite character: ";

cin.get(c2);

cout<<"The first character you entered is "<<c;

cout<<", and the second one is "<<c2<<endl;

}

5. degree.cpp

/\* Debug the following program to fix the potential errors\*/

#include<iostream>

using namespace std;

int main(){

int shape;

double degree,transition;

shape=17;

transition=100.0/shape;

degree=0;

while(true){

if(degree>100.0){

cout<<degree<<" is greater than 100.0\n";

break;

}

else if(degree<100.0)

cout<<degree<<" is smaller than 100.0\n";

else

cout<<degree<<" is equal to 100.0\n";

degree+=transition;

}

return 0;

}

6. strlength.cpp

/\* Predict the output of executing the following program.

If you think there is a bug, fix it\*/

#include<iostream>

using namespace std;

#include<string>

int buggy(string s){

int counter=-1;

while(counter<s.length())

counter++;

return counter;

}

int main(){

string s = "Charlotte and Marlene are angels.";

cout<<buggy(s)<<endl;

return 0;

}