| **Activity No. <n>** | |
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| **Hands-on Activity 1.2 Basic C++ Programming** | |
| **Course Code:** CPE010 | **Program:** Computer Engineering |
| **Course Title:** Data Structures and Algorithms | **Date Performed: 9/9/24** |
| **Section: CPE21S4** | **Date Submitted: 9/9/24** |
| **Name(s): Santos, Andrei R.** | **Instructor:** |
| **6. Output** | |
| | **SECTIONS** | **ANSWER** | | --- | --- |  | Header File Declaration Section | #include <iostream> | | --- | --- | | Global Declaration Section |  | | Class Declaration and Method Definition  Section | class Triangle{  private:  double totalAngle, angleA, angleB, angleC;  public:  Triangle(double A, double B, double C);  void setAngles(double A, double B, double C);  const bool validateTriangle();  }; | | Main Function | int main(){  //driver code  Triangle set1(40, 30, 110);  if(set1.validateTriangle()){  std::cout << "The shape is a valid triangle.\n";  } else {  std::cout << "The shape is NOT a valid triangle.\n";  }  return 0;  } | | Method Definition | Triangle::Triangle(double A, double B, double C) {  angleA = A;  angleB = B;  angleC = C;  totalAngle = A+B+C;  }  void Triangle::setAngles(double A, double B, double C) {  angleA = A;  angleB = B;  angleC = C;  totalAngle = A+B+C;  }  const bool Triangle::validateTriangle() {  return (totalAngle <= 180);  } | | |
| **7. Supplementary Activity** | |
| 1.  Create a C++ program to swap the two numbers in different variables.  #include <iostream>  using namespace std;  int main()  {  int numb1;  int numb2;  int temp;  cout << "Enter number 1: "; cin >> numb1;  cout << "Enter number 2: "; cin >> numb2;  cout << "The numbers are: " << numb1 << " " << numb2 << endl;  temp = numb1;  numb1 = numb2;  numb2 = temp;    cout << "The numbers are now swapped: " << numb1 << " " << numb2 << endl;  return 0;  }  2.  Create a C++ program that has a function to convert temperature in Kelvin to Fahrenheit.  #include <iostream>  using namespace std;  int main()  {  double Kelv;  double Fahr;  cout << "Enter Kelvin temperature: "; cin >> Kelv;  Fahr = (Kelv - 273.15) \* 9/5 + 32;  cout << "The temperature of Kelvin to Farenheit is: " << Fahr << " F" << endl;  return 0;  }  3.  Create a C++ program that has a function that will calculate the distance between two points.  #include <iostream>  #include <cmath>  using namespace std;  int main()  {  double a1x\_1;  double a2x\_2;  double b1y\_1;  double b2y\_2;  double dist;  cout << "Enter your coordinates for x1: "; cin >> a1x\_1;  cout << "Enter your coordinates for y1: "; cin >> b1y\_1;  cout << "Enter your coordinates for x2: "; cin >> a2x\_2;  cout << "Enter your coordinates for y2: "; cin >> b2y\_2;  dist = sqrt(pow(a2x\_2 - a1x\_1, 2) + pow(b2y\_2 - b1y\_1, 2));  cout << "Now, this is the distance between the given two points: " << dist << endl;  } | |
| **8. Conclusion** | |
| I have regained again the knowledge regarding to C++ | |
| **9. Assessment Rubric** | |
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