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Assignment 1

Part A:

#include <iostream>

#include <string>

using namespace std;

//employee structure with name, hours worked (5 values), $/hour, and total pay

struct Employee

{

string name;

double hours[5];

double rate;

double pay;

};

//function to initialize the array with user inputted values

void initialize(Employee e[])

{

for (int i = 0; i < 4; i++)

{

cout << "Last name of employee #" << i + 1 << ": ";

cin >> e[i].name;

cout << "Hours worked on Monday: ";

cin >> e[i].hours[0];

cout << "Hours worked on Tuesday: ";

cin >> e[i].hours[1];

cout << "Hours worked on Wednesday: ";

cin >> e[i].hours[2];

cout << "Hours worked on Thursday: ";

cin >> e[i].hours[3];

cout << "Hours worked on Friday: ";

cin >> e[i].hours[4];

cout << "Hourly rate of employee #" << i + 1 << ": ";

cin >> e[i].rate;

cout << endl;

}

}

//compute total pay for employee

void compute(Employee &e)

{

int baseHours = 0, overHours = 0;

for (int h = 0; h < 5; h++)

{

baseHours += e.hours[h];

}

if (baseHours > 40)

{

overHours = baseHours - 40;

baseHours = 40;

}

e.pay = (baseHours \* e.rate) + (overHours \* (e.rate \* 1.5));

}

//output the pay of the employee

void result(Employee e)

{

cout << e.name << " payroll check ammount: $" << e.pay << endl;

}

int main()

{

Employee employees[4];

initialize(employees);

for (int i = 0; i < 4; i++)

{

compute(employees[i]);

}

cout << endl;

for (int i = 0; i < 4; i++)

{

result(employees[i]);

}

}

Part B:

#include <iostream>

#define PI 3.1415926535

using namespace std;

class Cylinder

{

private:

int radius;

int height;

double vol;

public:

void init(int r, int h)

{

radius = r;

height = h;

}

double getVolume()

{

vol = PI \* radius \* radius \* height;

return vol;

}

};

int main()

{

Cylinder c;

c.init(10,20);

double v = c.getVolume();

cout << "The volume is: " << v << endl;

}

Screenshots:



