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\* Vic Cuatico

\* 400507885

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\* Lab 3

\* Question 1

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#include <iostream>

#include <iomanip>

#include<string>

using namespace std;

class Employee

{

private:

string name;

int idNum;

string dep;

string pos;

public:

Employee();

//Mutators

void setName();

void setID();

void setDep();

void setPos();

//Accessors

string getName()const;

int getID()const;

string getDep()const;

string getPos()const;

};

Employee::Employee()

{

name = "";

idNum = 0;

dep = "";

pos = "";

}

//implementation

void Employee::setName() {

string n;

cin.clear();

cin.ignore();

getline(cin, n);

name = n;

}

void Employee::setID() {

int id;

cin >> id;

idNum = id;

}

void Employee::setDep() {

string d;

cin >> d;

dep = d;

}

void Employee::setPos() {

string p;

cin >> p;

pos = p;

}

string Employee::getName()const { return name; }

int Employee::getID()const { return idNum; }

string Employee::getDep()const { return dep; }

string Employee::getPos()const { return pos; }

int main()

{

Employee ea, eb, ec;

int width = 20;

cout << "WORKER NUMBER 1:" << endl;

cout << "Enter Name: ";

ea.setName();

cout << "Enter ID Number: ";

ea.setID();

cout << "Enter Department: ";

ea.setDep();

cout << "Enter position: ";

ea.setPos();

cout << "WORKER NUMBER 2:" << endl;

cout << "Enter Name: ";

eb.setName();

cout << "Enter ID Number: ";

eb.setID();

cout << "Enter Department: ";

eb.setDep();

cout << "Enter position: ";

eb.setPos();

cout << "WORKER NUMBER 3:" << endl;

cout << "Enter Name: ";

ec.setName();

cout << "Enter ID Number: ";

ec.setID();

cout << "Enter Department: ";

ec.setDep();

cout << "Enter position: ";

ec.setPos();

cout << endl << endl << endl;

cout << setw(width) << "NAME" << setw(width) << "ID NUMBER" << setw(width) << "DEPARTMENT" << setw(width) << "POSITION" << endl;

cout << setw(width) << ea.getName() << setw(width) << ea.getID() << setw(width) << ea.getDep() << setw(width) << ea.getPos() << endl;

cout << setw(width) << eb.getName() << setw(width) << eb.getID() << setw(width) << eb.getDep() << setw(width) << eb.getPos() << endl;

cout << setw(width) << ec.getName() << setw(width) << ec.getID() << setw(width) << ec.getDep() << setw(width) << ec.getPos() << endl;

return 0;

}

A computer screen with white text

Description automatically generated

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\* Vic Cuatico

\* 400507885

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\* Lab 3

\* Question 2

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#include <iostream>

using namespace std;

class Coin

{

private:

string sideUp;

public:

Coin();

void toss();

string getSideUp();

};

Coin::Coin()

{

sideUp = "HEADS";

}

void Coin::toss() {

if (rand() % 2 == 1)

{

sideUp = "HEADS";

}

else

{

sideUp = "TAILS";

}

}

string Coin::getSideUp() { return sideUp; }

int main()

{

Coin obj;

int count = 0;

srand(time(0));

for (int i = 0; i < 20; i++)

{

obj.toss();

cout << obj.getSideUp() << endl;

if (obj.getSideUp() == "HEADS")

{

count += 1;

}

}

cout << endl << "HEADS COUNT: " << count << endl;

return 0;

}

A screenshot of a computer

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