1.A boy has his money deposited $1000, $1500 and $2000 in banks-Bank A,Bank B and Bank C respectively. We have to print the money deposited by him

in a particular bank.

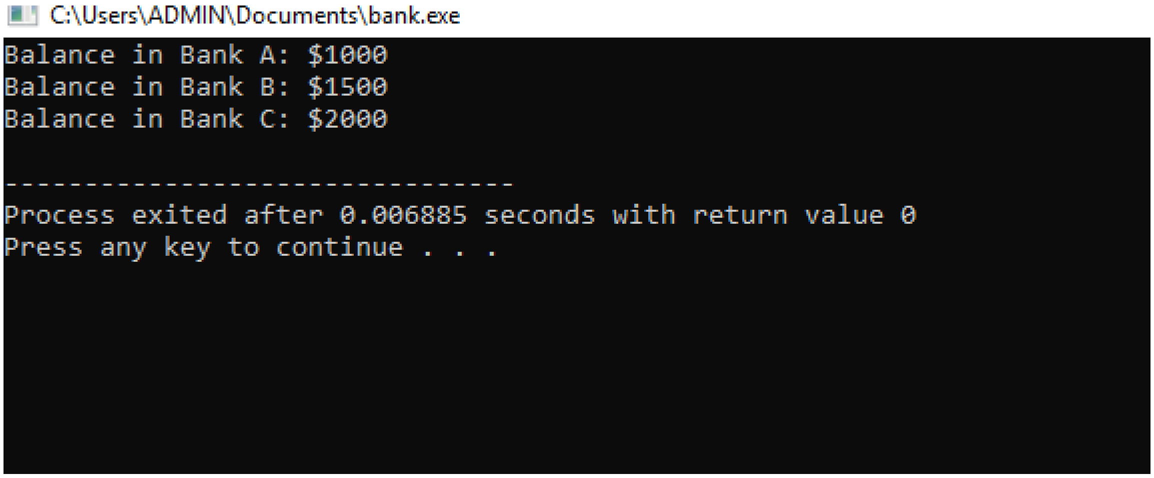
Create a class 'Bank' with a method 'getBalance' which returns 0. Make its three

subclasses named 'BankA! 'BankB' and 'BankC' with a method with the same

name 'getBalance' which returns the amount deposited in that particular bank.

Call the method 'getBalance' by the object of each of the three banks using C++

```
#include <iostream>
using namespace std;
class Bank {
public:
    virtual double getBalance() const {
        return 0.0;
    }
};
class BankA : public Bank {
public:
    double getBalance() const override {
        return 1000.0;
    }
};
class BankB : public Bank {
public:
    double getBalance() const override {
        return 1500.0;
    }
};
class BankC : public Bank {
public:
    double getBalance() const override {
        return 2000.0;
    }
};

int main() {
    BankA bankA;
    BankB bankB;
    BankC bankC;
    cout << "Balance in Bank A: $" << bankA.getBalance() << endl;
    cout << "Balance in Bank B: $" << bankB.getBalance() << endl;
    cout << "Balance in Bank C: $" << bankC.getBalance() << endl;

    return 0;
}
```



```
Balance in Bank A: $1000
Balance in Bank B: $1500
Balance in Bank C: $2000

--------------------------------
Process exited after 0.006885 seconds with return value 0
Press any key to continue . . .
```

2.Write a function that returns true if given array is empty, and false otherwise.

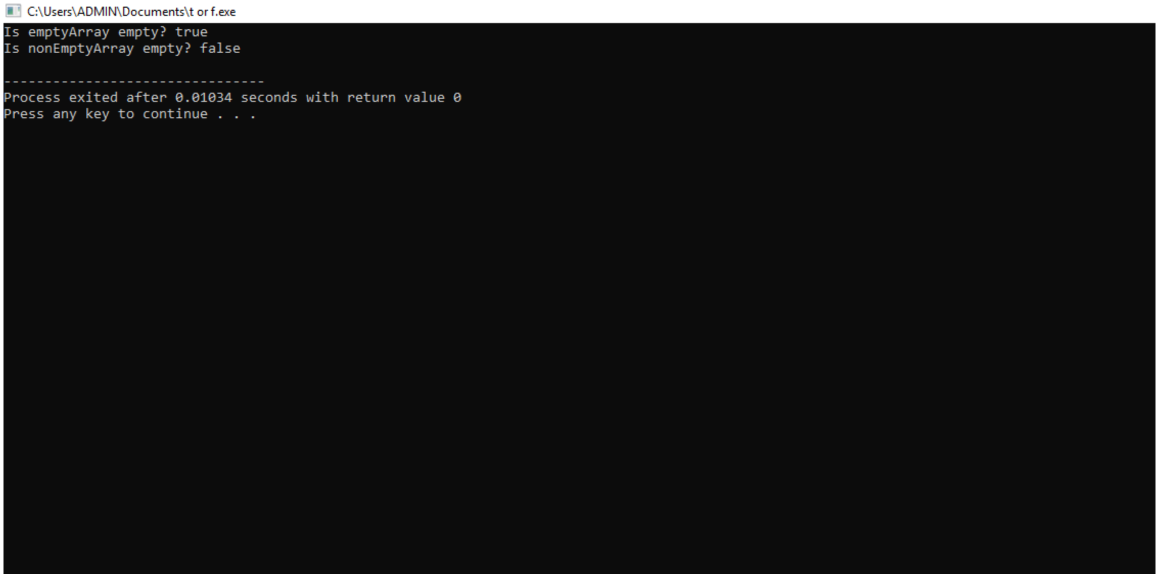
Eamples

Isempty({}) --→ true

Isempty({1,2,3}) --→ false

```
#include <iostream>
using namespace std;
bool isEmpty(const int* arr, int size) {
   return size == 0;
}

int main() {
   int emptyArray[] = {};
   int emptySize = sizeof(emptyArray) / sizeof(emptyArray[0]);
   cout << "Is emptyArray empty? " << (isEmpty(emptyArray, emptySize) ? "true" : "false") << endl;
   int nonEmptyArray[] = {1, 2, 3};
   int nonEmptySize = sizeof(nonEmptyArray) / sizeof(nonEmptyArray[0]);
```

```
    cout << "Is nonEmptyArray empty? " << (isEmpty(nonEmptyArray, nonEmptySize) ? "true" : "false") << endl;


    return 0;

}
```



C:\Users\ADMIN\Documents\t or f.exe

```
Is emptyArray empty? true
Is nonEmptyArray empty? false

--------------------------------
Process exited after 0.01034 seconds with return value 0
Press any key to continue . . .
```

3.In C++ programming, this is a keyword that refers to the current instance of the class Create class called Employee with attributes:

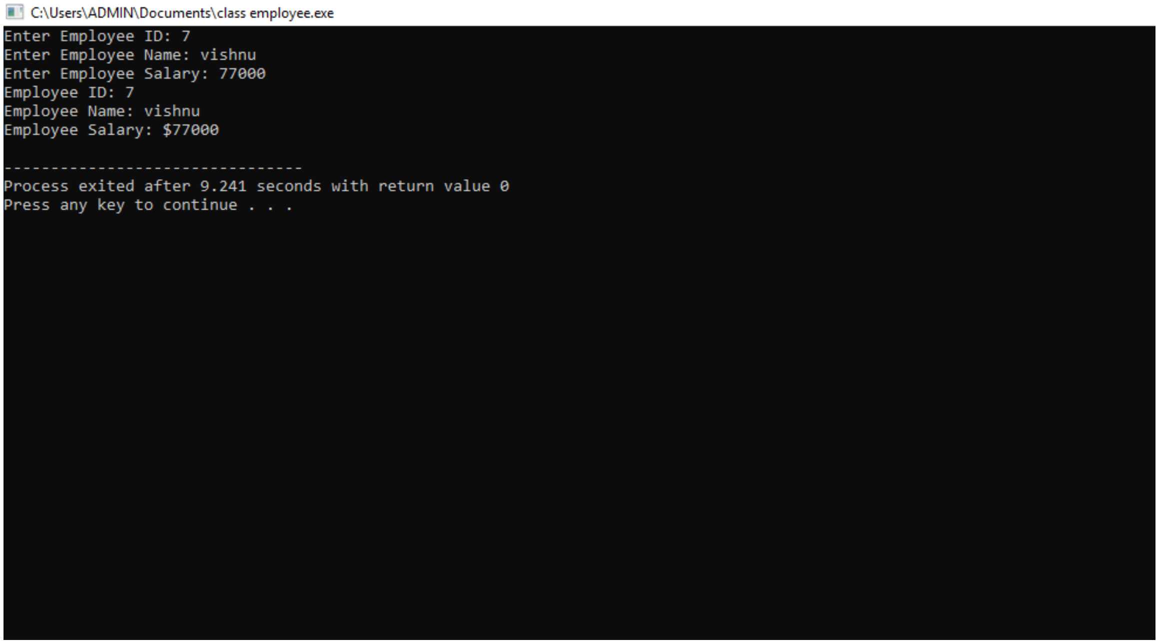
int empid char(20), float salary.

Use this pointer to refer to current instance and display the employee details.

```
#include <iostream>

#include <cstring>


using namespace std;
```

```
class Employee {
private:
    int empid;
    char name[20];
    float salary;

public:
    void inputDetails() {
        cout << "Enter Employee ID: ";
        cin >> empid;
        cin.ignore();

        cout << "Enter Employee Name: ";
        cin.getline(name, 20);

        cout << "Enter Employee Salary: ";
        cin >> salary;
    }
    void displayDetails() const {
        cout << "Employee ID: " << this->empid << endl;
        cout << "Employee Name: " << this->name << endl;
        cout << "Employee Salary: $" << this->salary << endl;
    }
};

int main() {
    Employee emp;
```

```
   emp.inputDetails();

   emp.displayDetails();


   return 0;

}
```

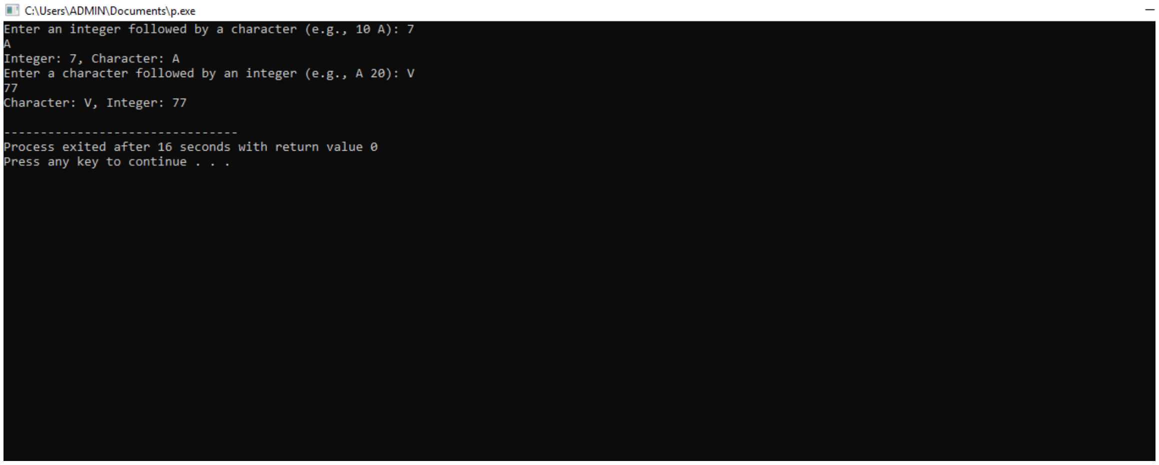


```
Enter Employee ID: 7
Enter Employee Name: vishnu
Enter Employee Salary: 77000
Employee ID: 7
Employee Name: vishnu
Employee Salary: $77000

--------------------------------
Process exited after 9.241 seconds with return value 0
Press any key to continue . . .
```

4.Create a class to print an integer and a character using two functions having the same name but different sequence of the integer and the character parameters.

For example, if the parameters of the first function are of the form (int n, char c), then that of the second function will be of the form (char c, int n).

```
#include <iostream>
using namespace std;
class Printer {
public:
    void print(int n, char c) {
        cout << "Integer: " << n << ", Character: " << c << endl;
    }
    void print(char c, int n) {
        cout << "Character: " << c << ", Integer: " << n << endl;
    }
};

int main() {
    Printer p;
    int num;
    char ch;
    cout << "Enter an integer followed by a character (e.g., 10 A): ";
    cin >> num >> ch;
    p.print(num, ch);
    cout << "Enter a character followed by an integer (e.g., A 20): ";
    cin >> ch >> num;
    p.print(ch, num);

    return 0;
}
```



```
Enter an integer followed by a character (e.g., 10 A): 7
A
Integer: 7, Character: A
Enter a character followed by an integer (e.g., A 20): V
77
Character: V, Integer: 77

--------------------------------
Process exited after 16 seconds with return value 0
Press any key to continue . . .
```