

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



## أمثلة في C++

صل على الحبيب المصطفى.

أما بعد:

سنتعلم ان شاء الله أمثلة متنوعة ويمكن من خلالها تعلم لغة برمجة السي بلس بلس ، حيث تم وضع كل الأكواد البرامج مع نتائجها في هذا الكتاب المتواضع من عبد فقير الى الله

ال  
الك  
ري  
م

أريد أن أخبرك وقبل إتمام قراءتك للكتاب، أني أنهيت هذا الكتاب بفضل الله ، فأرجوا أن تجد ما تبحث عنه ان شاء الله ، لكن ونصيحة مني لك كأخ في الإسلام و في سبيل الله ، لا تقرأ الكتاب و تحذفه استفدت منه أو لا ، ربما يوما ما ستحتاج هذه الأوامر فلا تستهن بأي فرصة في حياتك، أذكر مثلا يقول : " خبي قرشك الأبيض ليومك الأسود " ... وكذلك قد يكون أخوك أو أحد غيرك يحتاج الى ما في هذا الكتاب و بشدة ، فحاول مشاركته مع غيرك و ان شاء الله ، يبارك الله فيك و يزيدك من علمه .

قال رسول الله صلى الله عليه و سلم : من دل على خير ، فله أجر فاعله . رواه مسلم

أسأل الله العظيم أن يكون هذا الكتاب وأي نفع يأخذ منه، خالصا لوجهه الكريم، والحمد لله الذي هدانا وجعلنا مسلمين ٨-٨

١. بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

٢. الْحَمْدُ لِلَّهِ رَبِّ الْعَالَمِينَ

٣. الرَّحْمَنِ الرَّحِيمِ

٤. مَالِكِ يَوْمِ الدِّينِ

٥. إِيَّاكَ نَعْبُدُ وَإِيَّاكَ نَسْتَعِينُ

٦. اهْدِنَا الصِّرَاطَ الْمُسْتَقِيمَ

٧. صِرَاطَ الَّذِينَ أَنْعَمْتَ عَلَيْهِمْ غَيْرِ الْمَغْضُوبِ عَلَيْهِمْ وَلَا الضَّالِّينَ

## ١ - برنامج ترحيب

```

Untitled1.cpp
1  #include <iostream>
2  using namespace std;
3
4  int main()
5  {
6      cout << "salam 3alaykom \n" ;
7      cout << "Welcome " << endl << "C++";
8  }
    
```

```

C:\Users\SL\Desktop\Untitled1.exe
salam 3alaykom
Welcome
C++
-----
Process exited after 0.02373 seconds with return value 0
Press any key to continue . . .
    
```

## ٢ - متغيرات مختلفة

```

Untitled1.cpp
1  #include <iostream>
2  using namespace std;
3
4  int main()
5  {
6      int ar9am = 487;
7      float ar9am_3achariya = 15.77;
8      string nas = "Souhail";
9      char _7arf = 'u';
10
11     cout << ar9am << endl;
12     cout << ar9am_3achariya << endl;
13     cout << nas << endl;
14     cout << _7arf;
15 }
    
```

```

C:\Users\SL\Desktop\Untitled1.exe
487
15.77
Souhail
u
-----
Process exited after 0.02055 seconds with return value 0
Press any key to continue . . .
    
```

## ٣ - حساب متغيرات

```

Untitled1.cpp
1  #include <iostream>
2  using namespace std;
3
4  int main()
5  {
6      int x=50;
7      int y=85;
8      int total=x+y;
9
10     cout << total << endl;
11
12 }
    
```

```

C:\Users\SL\Desktop\Untitled1.exe
135
-----
Process exited after 0.009835 seconds with return value 0
Press any key to continue . . .
    
```

## ٤ - استخدام ثوابت

### الشكل العادي

```
Untitled1.cpp
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     int w=500;
7
8     cout << w << endl;
9
10    w=120;
11
12    cout << w << endl;
13
14 }
```

```
C:\Users\SL\Desktop\Untitled1.exe
500
120
-----
Process exited after 0.05418 seconds with return value 0
Press any key to continue . . .
```

## استخدام const

```
Untitled1.cpp
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     int const w=500;
7
8     cout << w << endl;
9
10    w=120;
11
12    cout << w << endl;
13
14 }
```

## ٥ - ادخال البيانات

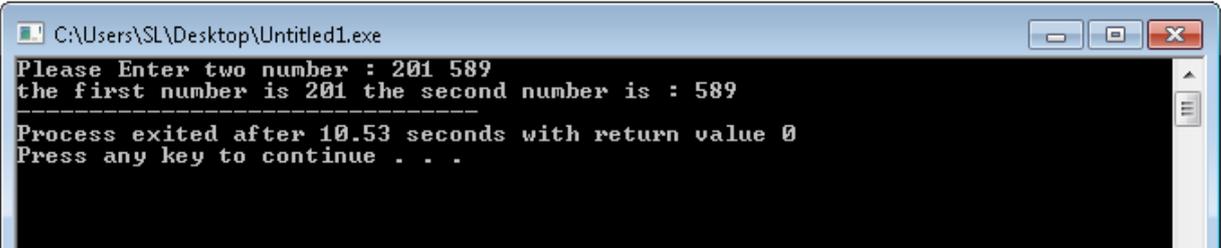
```
Untitled1.cpp
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     int n;
7     cout << "Please Enter a number : ";
8     cin >>n;
9     cout << "the number you entered is : "<< n ;
10
11 }
```

```
C:\Users\SL\Desktop\Untitled1.exe
Please Enter a number : 2020
the number you entered is : 2020
-----
Process exited after 5.991 seconds with return value 0
Press any key to continue . . .
```

```

Untitled1.cpp
1  #include <iostream>
2  using namespace std;
3
4  int main()
5  {
6      int x,y;
7      cout << "Please Enter two number : ";
8      cin >> x >> y;
9      cout << "the first number is " << x << " the second number is : "<< y ;
10
11 }

```



معلومة ...

\n سطر جديد

\t مساحة فارغة

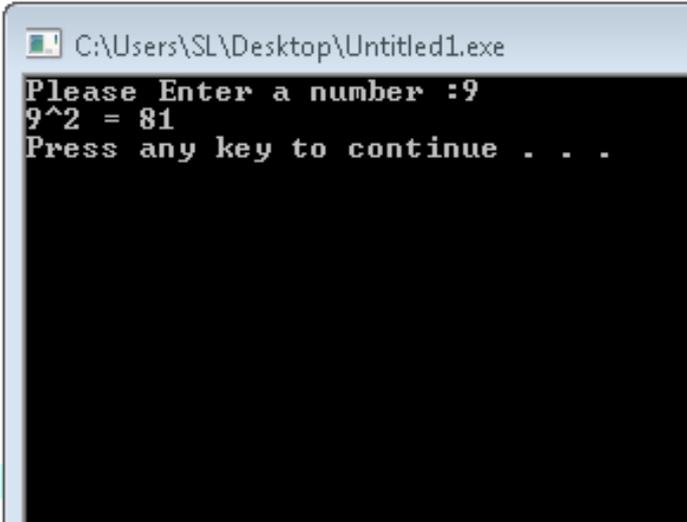
\a اصدار صوت

٧ - برنامج  $x^y$ 

```

Untitled1.cpp
1  #include <iostream>
2  #include <stdlib.h>
3  #include <math.h>
4  using namespace std;
5
6  int main()
7  {
8      int x,y,z;
9      cout << "Please Enter a number :";
10     cin >> x ;
11     z=pow(x, 2);
12     cout << x << "^2 = " << z << endl;
13     system("pause");
14 }

```



Untitled1.cpp

```

1  #include <iostream>
2  #include <stdlib.h>
3  #include <math.h>
4  using namespace std;
5
6  int main()
7  {
8  int x,y,z;
9  cout << "Please Enter a number :";
10 cin >> x ;
11 z=sqrt(x);
12 cout << "Jidr " << x << " = " << z << endl;
13 system("pause");
14 }

```

C:\Users\SL\Desktop\Untitled1.exe

```

Please Enter a number :4
Jidr 4 = 2
Press any key to continue . . .

```

٩ - حل معادلات

$$z1 = x^2 + x + 7$$

$$z2 = \frac{x+1}{y+1}$$

$$z3 = \frac{(x^2+x+5)^2}{x+y+5}$$

[\*] Untitled1.cpp

```

1  #include <iostream>
2  #include <stdlib.h>
3  #include <math.h>
4  using namespace std;
5
6  int main()
7  {
8      // mitale x=1 , y=1
9  int z1,z2,z3,x=1,y=1;
10 cout << "Equation solutions : "<< endl;
11 z1=pow(x, 2)+x+7;
12 z2=(x+1)/(y+1);
13 z3=pow(pow(x, 2)+x+5, 2)/(x+y+5);
14 cout << "z1 = " << z1 << endl;
15 cout << "z2 = " << z2 << endl;
16 cout << "z3 = " << z3 << endl;
17 system("pause");
18 }

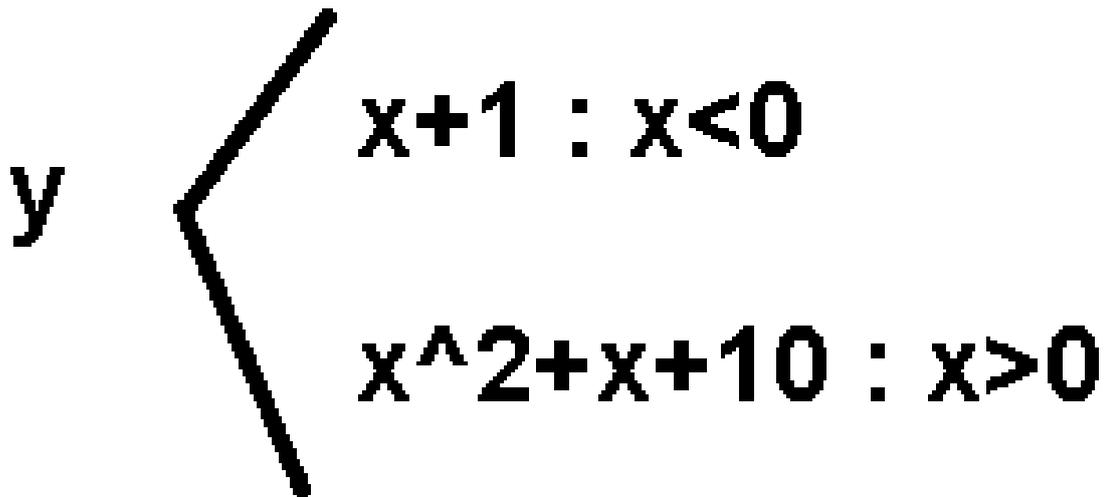
```

C:\Users\SL\Desktop\Untitled1.exe

```

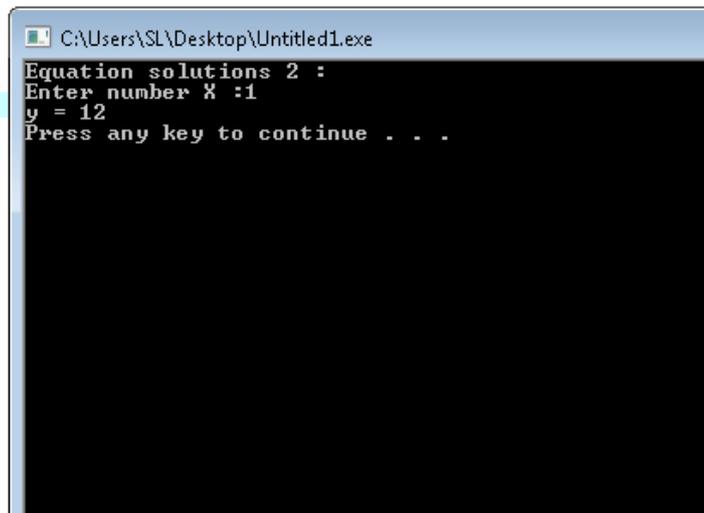
Equation solutions :
z1 = 9
z2 = 1
z3 = 7
Press any key to continue . . .

```



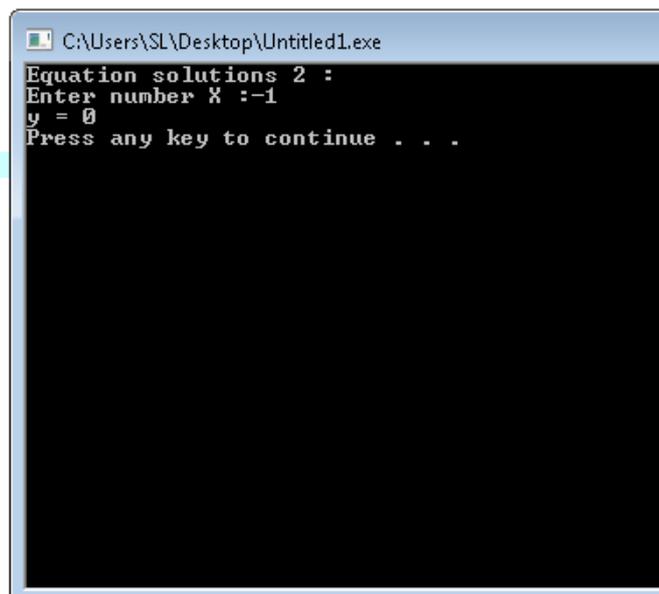
```

1  #include <iostream>
2  #include <stdlib.h>
3  #include <math.h>
4  using namespace std;
5
6  int main()
7  {
8  int x,y;
9  cout << "Equation solutions 2 : "<< endl;
10 cout << "Enter number X : ";
11 cin >> x;
12 if(x<0)
13 {
14     y=x+1;
15 }
16 else
17 {
18     y=pow(x, 2)+x+10;
19 }
20 cout << "y = " << y << endl;
21 system("pause");
22 }
    
```



```

1  #include <iostream>
2  #include <stdlib.h>
3  #include <math.h>
4  using namespace std;
5
6  int main()
7  {
8  int x,y;
9  cout << "Equation solutions 2 : "<< endl;
10 cout << "Enter number X : ";
11 cin >> x;
12 if(x<0)
13 {
14     y=x+1;
15 }
16 else
17 {
18     y=pow(x, 2)+x+10;
19 }
20 cout << "y = " << y << endl;
21 system("pause");
22 }
    
```



```

1  #include <iostream>
2  #include <stdlib.h>
3
4  using namespace std;
5
6  int main()
7  {
8  int password_database;
9  cout << "Please enter the password : " ;
10 cin >> password_database;
11 switch(password_database)
12 {
13     case 2000:
14         cout << "This password is for employees" << endl;
15         break;
16     case 2020:
17         cout << "Welcome as a system administrator" << endl;
18         break;
19
20     default:
21         cout << "The password is wrong" << endl;
22 }
23 system("pause");
24 }

```

```

C:\Users\SL\Desktop\Untitled1.exe
Please enter the password :2012
The password is wrong
Press any key to continue . . .

```

```

1  #include <iostream>
2  #include <stdlib.h>
3
4  using namespace std;
5
6  int main()
7  {
8  int password_database;
9  cout << "Please enter the password : " ;
10 cin >> password_database;
11 switch(password_database)
12 {
13     case 2000:
14         cout << "This password is for employees" << endl;
15         break;
16     case 2020:
17         cout << "Welcome as a system administrator" << endl;
18         break;
19
20     default:
21         cout << "The password is wrong" << endl;
22 }
23 system("pause");
24 }

```

```

C:\Users\SL\Desktop\Untitled1.exe
Please enter the password :2020
Welcome as a system administrator
Press any key to continue . . .

```

## ١٢ - طباعة ١٠ من صلاة وسلام على رسول الله (for)

Untitled1.cpp

```
1 #include <iostream>
2 #include <stdlib.h>
3
4 using namespace std;
5
6 int main()
7 {
8     for(int x=1;x<=10;x++)
9     {
10         cout << x <<"- alahoma sali wasalim 3ala sayidina muhammed" <<endl;
11     }
12     system("pause");
13 }
```

C:\Users\SL\Desktop\Untitled1.exe

```
1- alahoma sali wasalim 3ala sayidina muhammed
2- alahoma sali wasalim 3ala sayidina muhammed
3- alahoma sali wasalim 3ala sayidina muhammed
4- alahoma sali wasalim 3ala sayidina muhammed
5- alahoma sali wasalim 3ala sayidina muhammed
6- alahoma sali wasalim 3ala sayidina muhammed
7- alahoma sali wasalim 3ala sayidina muhammed
8- alahoma sali wasalim 3ala sayidina muhammed
9- alahoma sali wasalim 3ala sayidina muhammed
10- alahoma sali wasalim 3ala sayidina muhammed
Press any key to continue . . .
```

## ١٣ - طباعة ١٠ من صلاة وسلام على رسول الله (while)

```
1 #include <iostream>
2 #include <stdlib.h>
3
4 using namespace std;
5
6 int main()
7 {
8     int x=1;
9     while(x<=10)
10 {
11     cout << x <<"- alahoma sali wasalim 3ala sayidina muhammed" <<endl;
12     x++;
13 }
14 system("pause");
15 }
```

C:\Users\SL\Desktop\Untitled1.exe

```
1- alahoma sali wasalim 3ala sayidina muhammed
2- alahoma sali wasalim 3ala sayidina muhammed
3- alahoma sali wasalim 3ala sayidina muhammed
4- alahoma sali wasalim 3ala sayidina muhammed
5- alahoma sali wasalim 3ala sayidina muhammed
6- alahoma sali wasalim 3ala sayidina muhammed
7- alahoma sali wasalim 3ala sayidina muhammed
8- alahoma sali wasalim 3ala sayidina muhammed
9- alahoma sali wasalim 3ala sayidina muhammed
10- alahoma sali wasalim 3ala sayidina muhammed
Press any key to continue . . .
```

## ١٤ - طباعة ١٠ من صلاة وسلام على رسول الله (do while)

Untitled1.cpp

```
1 #include <iostream>
2 #include <stdlib.h>
3
4 using namespace std;
5
6 int main()
7 {
8     int x=1;
9     do
10 {
11     cout << x <<"- alahoma sali wasalim 3ala sayidina muhammed" <<endl;
12     x++;
13 }while(x<=10);
14
15 system("pause");
16 }
```

C:\Users\SL\Desktop\Untitled1.exe

```
1- alahoma sali wasalim 3ala sayidina muhammed
2- alahoma sali wasalim 3ala sayidina muhammed
3- alahoma sali wasalim 3ala sayidina muhammed
4- alahoma sali wasalim 3ala sayidina muhammed
5- alahoma sali wasalim 3ala sayidina muhammed
6- alahoma sali wasalim 3ala sayidina muhammed
7- alahoma sali wasalim 3ala sayidina muhammed
8- alahoma sali wasalim 3ala sayidina muhammed
9- alahoma sali wasalim 3ala sayidina muhammed
10- alahoma sali wasalim 3ala sayidina muhammed
Press any key to continue . . .
```

## ١٥ - حساب أرقام داخل مصفوفة

```
1 #include <iostream>
2 #include <stdlib.h>
3
4 using namespace std;
5
6 int main()
7 {
8
9     int total=0;
10    int box[7]={10,10,10,10,10,10,10};
11
12    for(int x=0;x<7;x++)
13    {
14        total = total + box[x];
15    }
16
17    cout << "total :" << total <<endl;
18    system("pause");
19 }
```

C:\Users\SL\Desktop\Untitled1.exe

```
total :70
Press any key to continue . . .
```

## ١٦ - رقم المستخدم باستخدام functions

```
1 #include <iostream>
2 #include <stdlib.h>
3
4 using namespace std;
5
6 void usersalam(int x)
7 {
8     cout << "user number : " << x << endl;
9 }
10
11
12
13 int main()
14 {
15     usersalam(2544);
16
17     system("pause");
18 }
19
20
```

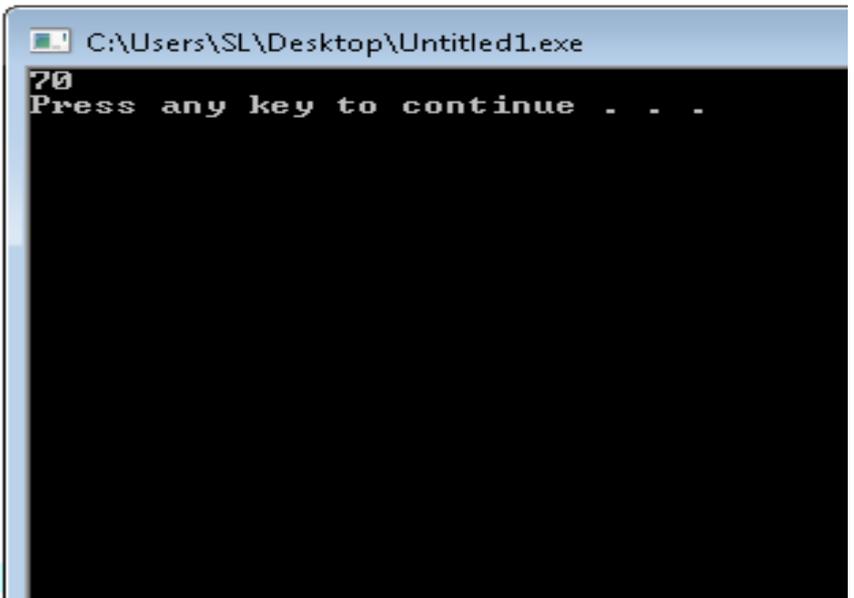
C:\Users\SL\Desktop\Untitled1.exe

```
user number : 2544
Press any key to continue . . .
```

```

1  #include <iostream>
2  #include <stdlib.h>
3
4  using namespace std;
5
6  void calc(int x,int y)
7  {
8      cout << x+y << endl;
9  }
10
11
12
13  int main()
14  {
15
16      calc(10,60);
17
18      system("pause");
19  }
20

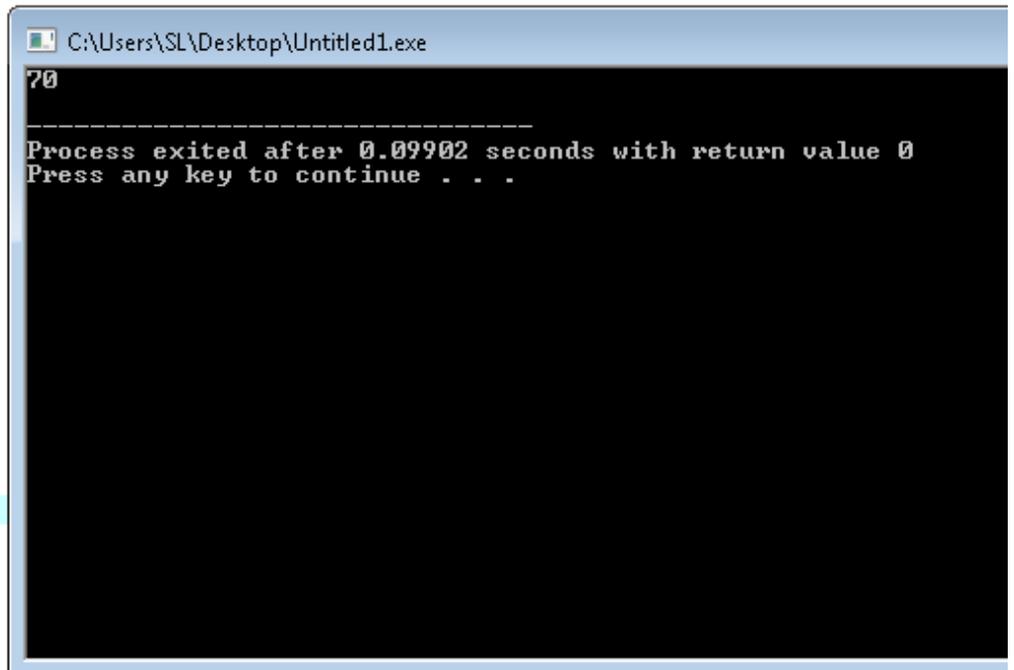
```



```

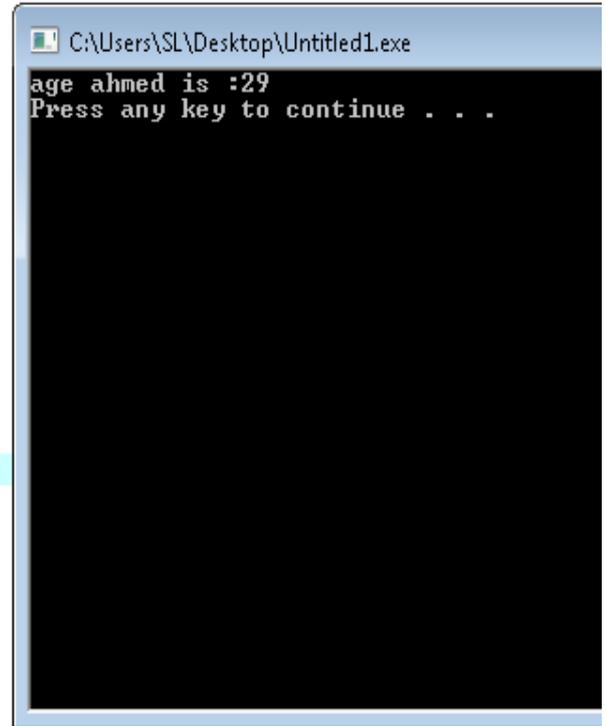
1  #include <iostream>
2  #include <stdlib.h>
3
4  using namespace std;
5
6  int calc(int x,int y)
7  {
8      int total = x+y;
9      return total;
10 }
11
12
13  int main()
14  {
15
16
17      cout << calc(10,60) << endl;
18      return 0;
19
20      //system("pause");
21  }
22

```



## ١٨ - برنامج اظهار معلومات الموظف

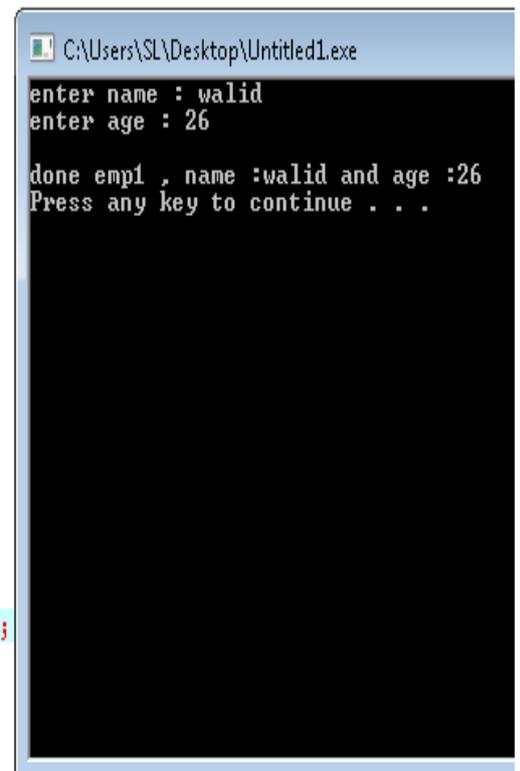
```
1 #include <iostream>
2 #include <stdlib.h>
3 using namespace std;
4 struct employee
5 {
6     int n;
7     string name;
8     int age;
9 };
10
11 int main()
12 {
13     employee emp1;
14     emp1.n=1;
15     emp1.name="ahmed";
16     emp1.age=29;
17
18     employee emp2;
19     emp2.n=2;
20     emp2.name="farid";
21     emp2.age=20;
22
23     cout << "age " << emp1.name << " is :" << emp1.age << endl;
24
25     system("pause");
26 }
27
```



```
C:\Users\SL\Desktop\Untitled1.exe
age ahmed is :29
Press any key to continue . . .
```

## ١٩ - برنامج ادخال معلومات الموظف

```
1 #include <iostream>
2 #include <stdlib.h>
3 using namespace std;
4 struct employee
5 {
6     int n;
7     string name;
8     int age;
9 };
10
11 int main()
12 {
13     employee emp1;
14     emp1.n=1;
15     cout << "enter name : ";
16     cin >> emp1.name;
17     cout << "enter age : ";
18     cin >> emp1.age;
19     cout << endl;
20     cout << "done emp1 , name :" << emp1.name << " and age :" << emp1.age << endl;
21
22     system("pause");
23 }
24
```

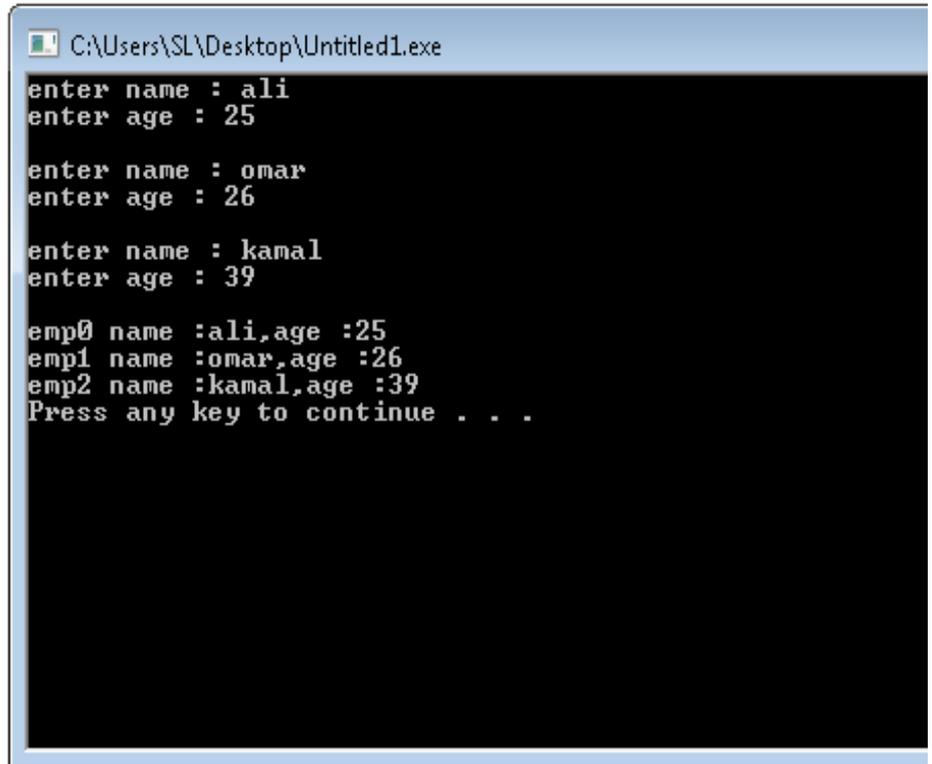


```
C:\Users\SL\Desktop\Untitled1.exe
enter name : walid
enter age : 26

done emp1 , name :walid and age :26
Press any key to continue . . .
```

## ٢٠ - برنامج ادخال و اظهار موظفين باستخدام حلقة

```
1 #include <iostream>
2 #include <stdlib.h>
3 using namespace std;
4 struct employee
5 {
6     int n;
7     string name;
8     int age;
9 };
10
11 int main()
12 {
13     employee emp[3];
14
15     for(int i=0;i<3;i++)
16     {
17         emp[i].n=i;
18         cout << "enter name : ";
19         cin >> emp[i].name;
20         cout << "enter age : ";
21         cin >> emp[i].age;
22         cout << endl;
23     }
24     for(int i=0;i<3;i++)
25     {
26         cout << "emp"<<i<< " name :"<< emp[i].name << ",age : " <<emp[i].age << endl;
27     }
28     system("pause");
29 }
30
```



## ٢١ - برنامج اظهار تاريخ يوم عيد الميلاد للشخص

```
Untitled1.cpp
1 #include <iostream>
2 #include <stdlib.h>
3 using namespace std;
4
5 struct date_person
6 {
7     int day;
8     int month;
9     int year;
10 };
11
12 struct person
13 {
14     int n;
15     date_person bt;
16 };
17
18 int main()
19 {
20     person n1;
21     n1.n=1;
22     n1.bt.day=21;
23     n1.bt.month=05;
24     n1.bt.year=1992;
25
26
27     cout << "The day he was born is : "<< n1.bt.day << endl;
28
29     system("pause");
30 }
31
```



Untitled1.cpp

```

1  #include <iostream>
2  #include <fstream>
3
4  using namespace std;
5
6
7  int main()
8  {
9      ofstream myfile;
10     myfile.open ("example.txt");
11     myfile << "writing this to a file.\n";
12     myfile.close();
13     return 0;
14 }
15

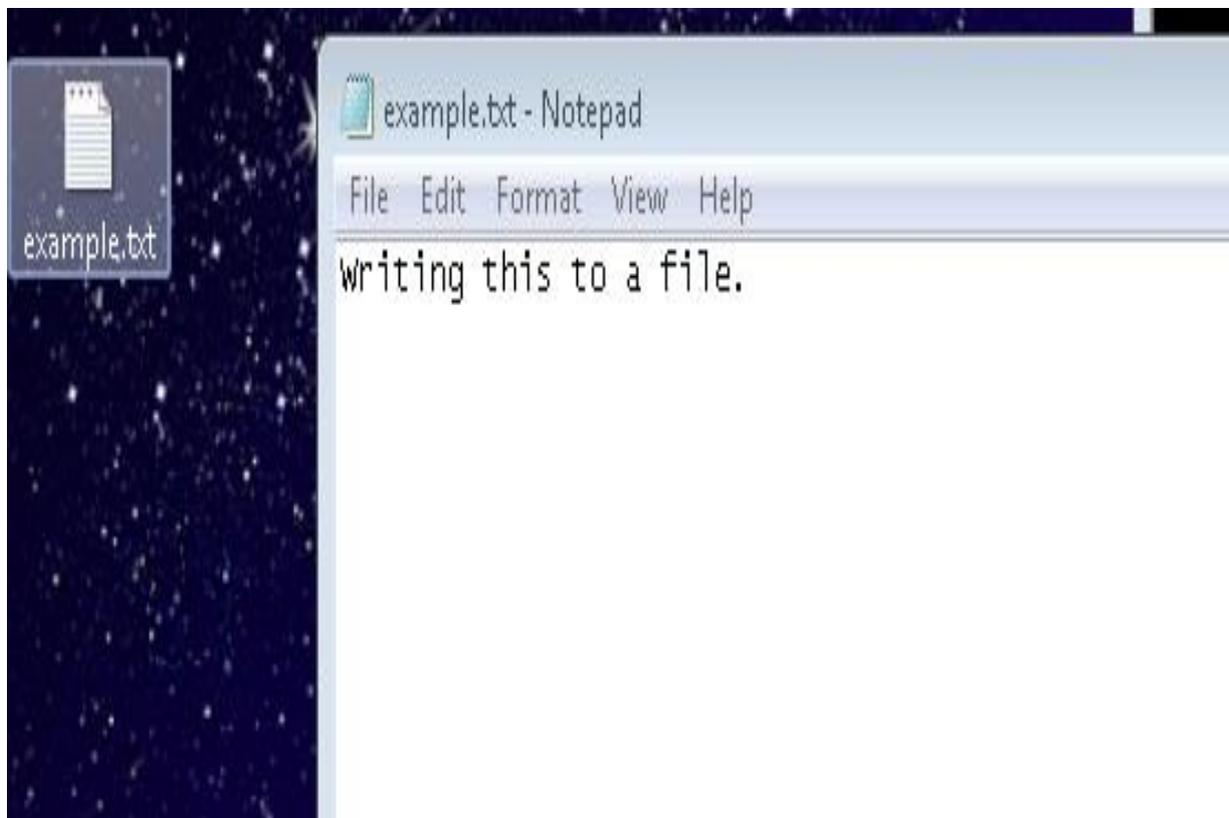
```

C:\Users\SL\Desktop\Untitled1.exe

```

-----
Process exited after 0.008689 seconds with return value 0
Press any key to continue . . .

```



Untitled1.cpp

```

1  #include <iostream>
2  #include <fstream>
3
4  using namespace std;
5
6
7  int main()
8  {
9      string name;
10     string email;
11
12     ofstream myfile;
13     myfile.open ("database.txt");
14
15     cout << "Enter ur name :";
16     cin >> name;
17     cout << "Enter ur email :";
18     cin >> email;
19
20     myfile << "Name : " << name << " , Email : " << email << " ";
21     myfile.close();
22     return 0;
23 }
24

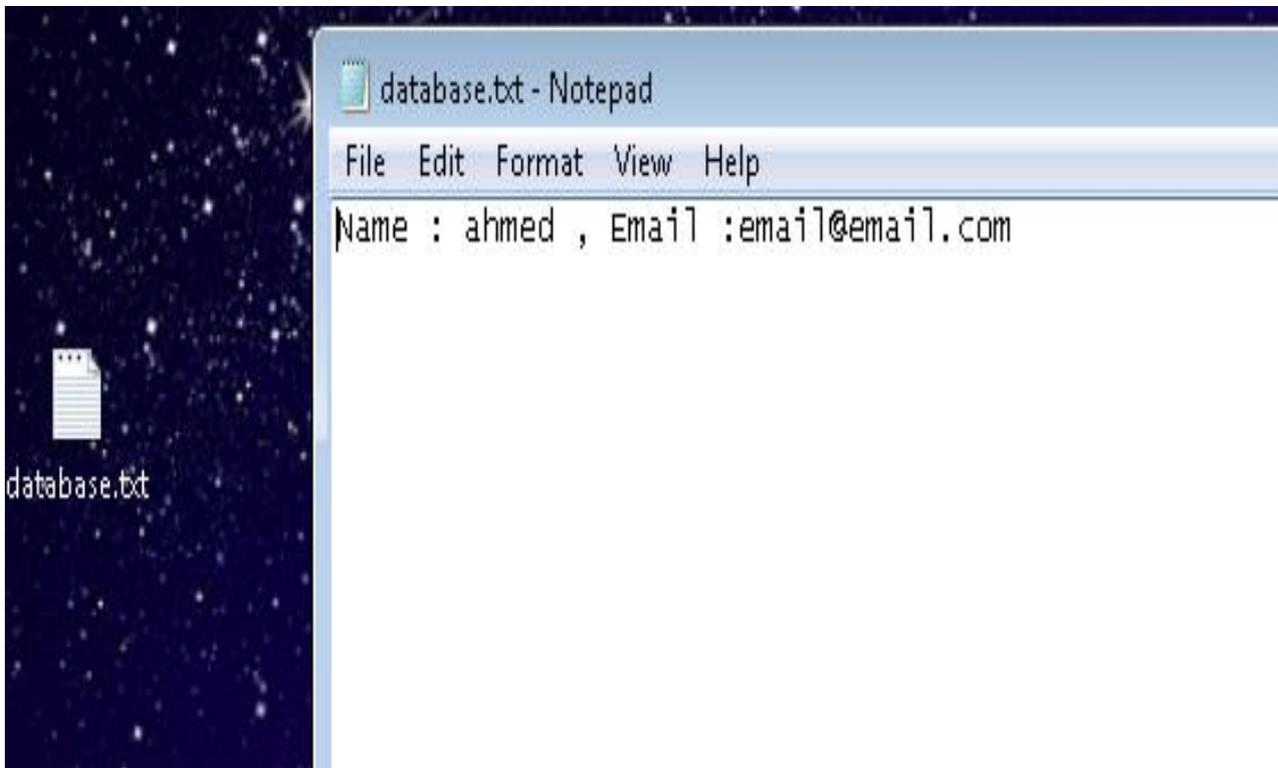
```

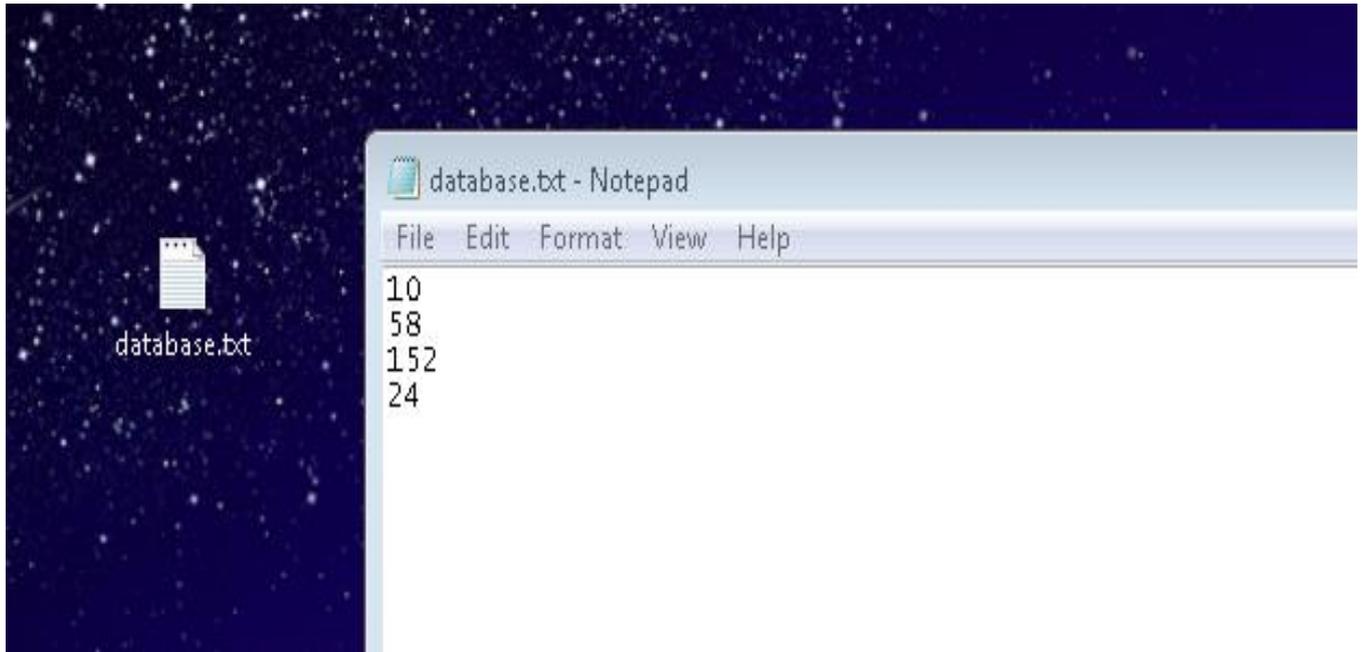
```

C:\Users\SL\Desktop\Untitled1.exe
Enter ur name :ahmed
Enter ur email :email@email.com

-----
Process exited after 11.08 seconds with return value 0
Press any key to continue . . .

```

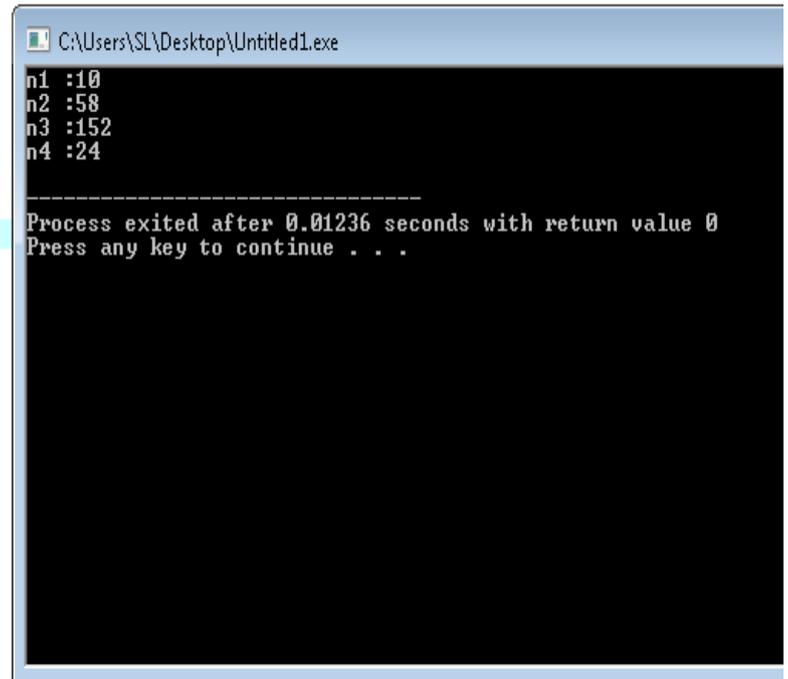




```

1 #include <iostream>
2 #include <fstream>
3
4 using namespace std;
5
6
7 int main()
8 {
9
10 ifstream myfile;
11 myfile.open ("database.txt");
12
13 if(myfile.fail())
14 {
15     cerr << "Error found in the file" << endl;
16     exit(1);
17 }
18
19 int x,y,z,w;
20 myfile >> x >> y >> z >> w;
21
22 cout << "n1 :" << x << endl;
23 cout << "n2 :" << y << endl;
24 cout << "n3 :" << z << endl;
25 cout << "n4 :" << w << endl;
26
27 return 0;
28 }
29

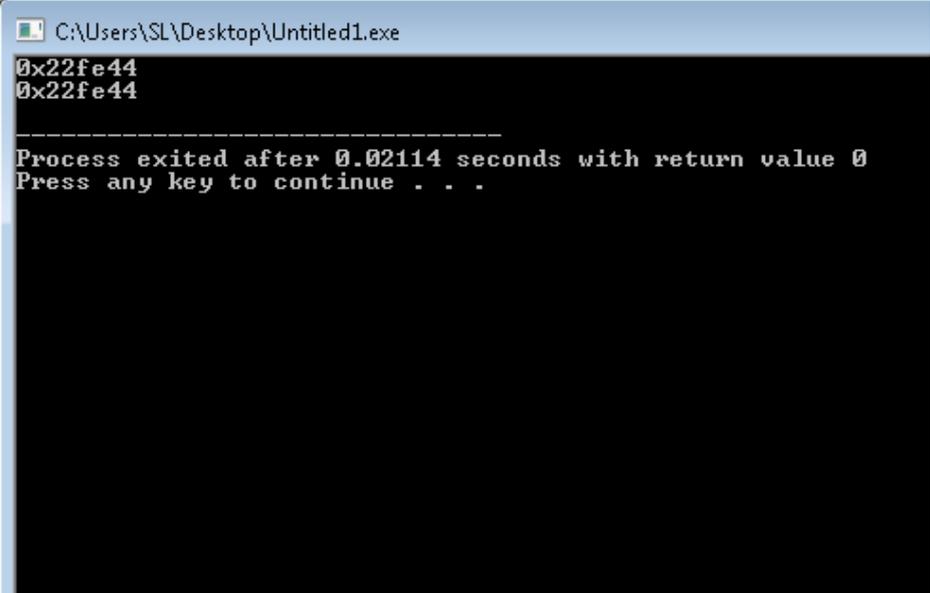
```



```

Untitled1.cpp
1  #include <iostream>
2  #include <fstream>
3
4  using namespace std;
5
6
7  int main()
8  {
9
10 int x=5;
11
12 cout << &x << endl;
13
14 int *Xpointer;
15
16 Xpointer = &x;
17
18 cout << Xpointer << endl;
19
20 return 0;
21 }
22

```



لا تنسانا من صالح دعاء جزاك الله خيرا.

تم انشاء أمثلة في C++ بفضل الله وحمده

المؤلف - العبد الفقير الى الله الغني الكريم سهيل

اللهم صل وسلم على سيدنا محمد وعلى آله وصحبه أجمعين

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