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# أكواد برمجية C++

إعداد المهندس

يحيى عبدالناصر العباسي

• طباعة الاسم و العمر و الطول:

```
double length;  
int age;  
char name;  
  
cout<<"\n how are your age: ";  
cin>>age;  
  
cout<<"\n how are you long: ";  
cin>>length;  
  
cout<<"\n what is your name: ";  
cin>>name;
```

• كود لإدخال عددين:

```
int number1, number2;  
  
cout<<"type the first number: ";  
cin>>number1;  
cout<<"type the second number: ";  
cin>>number2;
```



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• جمع عددين:

```
int number1, number2, sum;

cout<<"type the first number: ";
cin>>number1;
cout<<"type the second number: ";
cin>>number2;

sum = number1 + number2;
cout<<"sum = "<<sum;
```

• طرح عددين:

```
int number1, number2, mins;

cout<<"type the first number: ";
cin>>number1;
cout<<"type the second number: ";
cin>>number2;

mins = number1 - number2;
cout<<"minus = "<<mins;
```

• قسمة عددين:

```
int number1, number2, divided;

cout<<"type the first number: ";
cin>>number1;
cout<<"type the second number: ";
cin>>number2;

divided = number1 / number2;
cout<<"divided = "<<divided;
```

• ضرب عددين:

```
int number1, number2, multi;

cout<<"type the first number: ";
cin>>number1;
cout<<"type the second number: ";
cin>>number2;

multi = number1 * number2;
cout<<"multiplied = "<<multi;
```

• آلة حاسبة:

```
int number1, number2, numbers;
char char1;

cout<<"write the first number: ";
cin>> number1 ;
cout<<"write the second number: ";
cin>> number2 ;
cout<<"type char: ";
cin>> char1 ;
    if(char1 == '+')
{
numbers = number1 + number2;
cout<<numbers ; }
    else if(char1 == '*')
{
numbers = number1 * number2;
cout<<numbers;
}
    else if(char1 == '-')
{
numbers = number1 - number2;
cout<<numbers;
}
    else if(char1 == '/')
{
numbers = number1 / number2;
cout<<numbers;
}
    else if(char1 == '%')
{
numbers = number1 % number2;
cout<<numbers;
}
    else
cout<<"error";
```

- جمع الأرقام الموجبة المدخلة و حساب المتوسط الحسابي:

```
    for(i=1;i<=10;++i)
    {
    cout<<i<<".type any number: ";
    cin>>number;
    |
    if (number<=0)
        {
            break;
        }
    sum += number;
}

cout<<"\n sum ="<<sum;
average = sum / (i-1);
cout<<"\n average ="<<average;
```

- جمع عددين موجبين وحساب المتوسط الحسابي باستخدام :WHILE,DO

```
int number1, number2, sum, average;

do
{
    cout<<"\n type the first numbers: ";
    cin>>number1;

    cout<<"\n type the second numbers: ";
    cin>>number2;

    sum = number1 + number2;
    cout<<"\n sum ="<<sum;
    average = sum / 2;
    cout<<"\n average ="<<average;
}
while ( (number1>=0) && (number2>=0) );
```

• طباعة من 1 إلى 10 باستخدام "while":

```
int i=1;
while(i<=10)
{
    cout<<"\ni= "<<i;
    ++i;
}
```

• طباعة من 10 إلى 1 باستخدام "while":

```
int i=10;
while(i>=1)
{
    cout<<"\ni= "<<i;
    --i;
}
```



- كود لإدخال عددين موجبين ومعرفة إن كان العدد أكبر أو أصغر أو يساوي:

```
int number1,number2,i,n=2;

for(i=1;i<=n;)
{
cout<<"type the first number: ";
cin>>number1;

cout<<"type the second number: ";
cin>>number2;

if((number1<=0)|| (number2<=0))
{
    cout<<"the numbers not positive.";
    break;
}

else if(number1>number2)
{
    cout<<number1<<" > "<<number2<<"\n";
}
else if(number2>number1)
{
    cout<<number2<<" > "<<number1<<"\n";
}
else if(number1==number2)
{
    cout<<number1<<" = "<<number2<<"\n";
}
else
    cout<<"error";
```

• إدخال درجة طالب و تقدير درجته (ممتاز, جيد جداً, جيد, مقبول...):

مهم

```
int mark;

cout<<"type mark student:";

cin>>mark;

if( (mark>=90) && (mark<=100) )

cout<<"excellent";

else if( (mark>=80) && (mark<90) )

cout<<"very good";

else if( (mark>=70) && (mark<80) )

cout<<"good";

else if( (mark>=60) && (mark<70) )

cout<<"accept";

else if(mark<=59)

cout<<"filed";

else if (mark>100)

cout<<"error";
```

مهم

• طباعة من 1 إلى 10 باستخدام "for":

```
int i;

for(i=1;i<=10;i++)
{
    cout<<"\ni = "<<i;
}
```

مهم

• طباعة من 10 إلى 1 باستخدام "for":

```
int i;

for(i=10;i>=1;i--)
{
    cout<<"\ni = "<<i;
}
```

- إدخال عدد و إخراج جدول الضرب الخاص بهذا العدد:

```
int i, j;
for (i=1; i<=10; i++)
{
    cout<<"\n i=";
    cin>>i;

    for (j=1; j<=10; j++)
    {
        cout<<"\n i * j = "<<i*j;
    }
}
```

❖ ملاحظة:

لإخراج جدول الضرب لعدد دون إدخاله, نكتب "cout" بدلاً من  
"cin".

مهم

```
cout<<"\n i=";
cout>>i;
```

• حساب مساحة و محيط مربع:

```
int space,perimeter,sr;

cout<<"type the side length of a square: ";
cin>>sr;

space = sr * sr;
cout<<"\n space = "<<space;

perimeter = sr * 4;
cout<<"\n perimeter = "<<perimeter;
```

• حساب مساحة و محيط مستطيل:

```
int space,perimeter,length,width;

cout<<"type the length of a rectangle: ";
cin>>length;

cout<<"type the width of a rectangle: ";
cin>>width;

space = length * width;
cout<<"\n space = "<<space;

perimeter = (length + width)*2;
cout<<"\n perimeter = "<<perimeter;
```

• حساب مساحة و محيط دائرة:

```
double space,perimeter,pi=3.14,r;  
  
cout<<"type the diameter of a circle: ";  
cin>>r;  
  
space = pi * r * r;  
cout<<"\n space = "<<space;  
  
perimeter = 2 * pi * r;  
cout<<"\n perimeter = "<<perimeter;
```

• حساب مساحة و محيط مثلث:

```
int space,perimeter,high,base;  
  
cout<<"type the base of a triangle: ";  
cin>>base;  
  
cout<<"type the high of a triangle: ";  
cin>>high;  
  
space = (base * high) / 2;  
cout<<"\n space = "<<space;  
  
perimeter = base * 3;  
cout<<"\n perimeter = "<<perimeter;
```