

دورات برمجة 1

تم إعادة كتابة جميع الدورات الموجودة بملفات الزميلة تبارك ووضعها في ملف واحد

مع حذف جميع الأسئلة المكررة

بالإضافة إلى دورة الامارات F20 من ملف الزميلة بيان-XBayan

مع إضافة أكواد جديدة على الملف كتابة يزن الست

#ملاحظة مكتوبة على ملفات الزميلة تبارك: لطلب الملخصات وأسئلة الدورات والكورسات الأكادémie والمهنية

التواصل على الرقم

Tbark 4 Wrold : 0937974873

تم وضع خيارات تحت الكود (اختر الإجابة الصحيحة) للإجابة على السؤال دون النظر إلى خرج البرنامج

إعداد: يزن الست - ماري حسين

Q1:

```
0 references
static void Main(string[] args)
{
    double i = 0, j = 0;
    for (; i<= 2 ; i++)
    {
        j = i + 1;
        i += 0.25;
    }
    Console.WriteLine(j);
}
```

Microsoft Visual Studio Debug Console

2.25

C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.

Press any key to close this window . . .

- 2.25
- 1.25
- 0.25
- 25

Q2:

```
0 references
static void Main(string[] args)
{
    string value1 = "cat";
    SetString1(ref value1);
    Console.WriteLine(value1);
    string value2;
    SetString2(1, out value2);
    Console.WriteLine(value2);
}

1 reference
static void SetString1 (ref string value)
{
    if(value == "cat")
    {
        Console.WriteLine("Is cat");
    }
    value = "dog";
}

static void SetString2(int number , out string value)
{
    if (number == 1)
    {
        value = "one";
    }
    else
    {
        value = "carrot";
    }
}
```

Microsoft Visual Studio Debug Console

Is cat

dog

one

C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.

Press any key to close this window . . .

- Is cat dog
- dog one
- Is cat carrot
- Is cat dog one

Q3:

```
0 references
static void Main(string[] args)
{
    float y = 5;
    v(y, 7);
    Console.WriteLine(y);
}

1 reference
static void v(float x , int k)
{
    x = x + k % 2;
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is as follows:

```
Microsoft Visual Studio Debug Console
5
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.
Press any key to close this window . . .
```

- 10
- 5
- 105
- 0

Q4:

```
0 references
static void Main(string[] args)
{
    string[] month = {"Jan", "Feb", "Mar", "Apr", "May", "Jun", "Jul",
    "Aug", "Sep", "Oct", "Nov", "Dec"};

    int[] days = { 31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31 };

    int k = 2;
    while(k <= 6)
    {
        Console.Write(month[k] + "," + days[k]);
        k = k + 3; // OR : k+=3;
    }
    Console.WriteLine();
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is as follows:

```
Microsoft Visual Studio Debug Console
Mar,31Jun,30
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.
Press any key to close this window . . .
```

- Apr,30, Jun,31
- Feb,28, Mar,30
- Mar,31, Jun,30
- Jan,31, Feb,28

Q5:

```
0 references
static void Main(string[] args)
{
    int x = 0;
    for (; x < 10; x++)
    {
        if (x < 5)
        {
            Console.WriteLine("x = " + x);
            x += 3;
        }
        else
        {
            x++;
        }
    }
    Console.WriteLine("x = " + x);
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is as follows:

```
Microsoft Visual Studio Debug Console
x = 0
x = 4
x = 10
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\Conso
lode 0.
Press any key to close this window . . .
```

- **x = 0 x = 10 x = 4**
- **x = 4 x = 5 x = 3**
- **x = 0 x = 4 x = 3**
- **x = 0 x = 4 x = 10**

Q6:

```
0 references
static void Main(string[] args)
{
    int i, j = 1, k;
    for (i = 0; i < 5; i++)
    {
        k = j++ + ++j;
        Console.Write(k + " ");
    }
    Console.Write("\n");
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is as follows:

```
Microsoft Visual Studio Debug Console
4 8 12 16 20
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\Conso
lode 0.
Press any key to close this window . . .
```

- **4 6 8 10 12**
- **6 8 10 14 16**
- **1 2 3 4 5 6**
- **4 8 12 16 20**

Q7:

```
0 references
static void Main(string[] args)
{
    Console.WriteLine(g(4) + g(5) + "," + g(6));
}

5 references
static int g(int k)
{
    if(k==1 || k == 2)
    {
        return 1;
    }
    else
    {
        return g(k - 1) + g(k - 2);
    }
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is:
8,8
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ode 0.
Press any key to close this window . . .

- 8,3
- 88,33
- 2,2
- 8,8

Q8:

```
0 references
static void Main(string[] args)
{
    int na = (int)'A'; int k;
    k = na;
    while (k <= na + 5)
    {
        Console.Write((char)k+",");
        k = k + 2;
    }
    Console.WriteLine(" ");
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is:
A,C,E,
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ode 0.
Press any key to close this window . . .

- A C E
- B D F
- A C E,
- A ,C, E,

Q9:

```
0 references
static void Main(string[] args)
{
    int c = 1, v = 1;
    while (c <= 100)
    {
        v = v * c++;
        c = c * 5;
        Console.WriteLine(v + " " + c);
    }
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The title bar says "Solution 'ConsoleApp1'". The console output shows three lines of text: "1 10", "10 55", and "550 280". Below the output, the path "C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\" is displayed, followed by "Code 0." and the instruction "Press any key to close this window . . .".

- 1 10 10 55 550 280
- 280 550 55 10 10 1
- 55 10 1 10 550 280
- 550 280 10 10 55 1

Q10:

```
0 references
static void Main(string[] args)
{
    Console.WriteLine(mul(3,4) + "," + mul(4,3));
}

2 references
static int mul(int a , int m)
{
    int r = 0;
    for (int i = 1; i <= m; i++)
    {
        r = r + i * a;
    }
    return r;
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The title bar says "Solution 'ConsoleApp1'". The console output shows the value "30,24". Below the output, the path "C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\" is displayed, followed by "Code 0." and the instruction "Press any key to close this window . . .".

- 30 , 03
- 24 , 30
- 30 , 42
- 30 , 24

Q11:

```
0 references
static void Main(string[] args)
{
    int n = 561;
    int d;
    while(n > 0)
    {
        d = n % 10;
        n /= 10;
        Console.WriteLine(d);
    }
    Console.WriteLine("\n");
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is as follows:

```
Microsoft Visual Studio Debug Console
165
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\
de 0.
Press any key to close this window . . .
```

- 156
- 651
- 561
- 165

Q12:

```
0 references
static void Main(string[] args)
{
    int m = 18, o = 0, e = 0;
    for (int i = 2; i < m; i++)
    {
        if (i % 2 == 0)
            e += i;
        else
            o += i;
    }
    Console.WriteLine(e + "," + o);
}
```

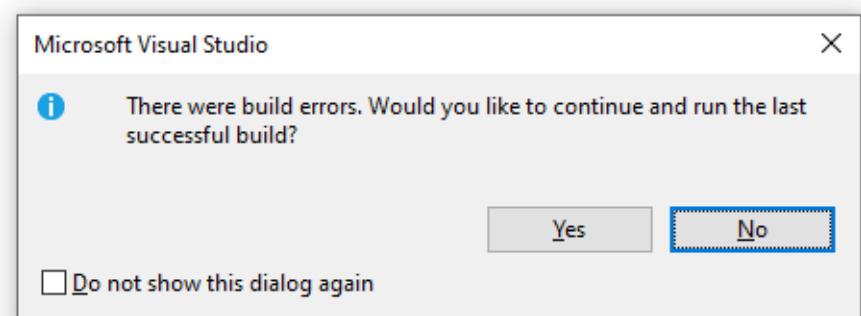
The screenshot shows the Microsoft Visual Studio Debug Console window. The output is as follows:

```
Microsoft Visual Studio Debug Console
72,80
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\
ode 0.
Press any key to close this window . . .
```

- 80,72
- 72,80
- 27,8
- 80,27

Q13:

```
0 references
static void Main(string[] args)
{
    int n;
    int[] a;
    Console.WriteLine("Enter n : ");
    n = int.Parse(Console.ReadLine());
    for (int i = 0; i < n; i++)
    {
        Console.Write("Enter n[" + i + "] : ");
        a[i] = int.Parse(Console.ReadLine());
    }
    Console.Write(" array ");
    for (int i = 0; i < n; i++)
    {
        Console.WriteLine("a[" + i + "] : " + a[i]);
    }
}
```



Q14:

```
0 references
static void Main(string[] args)
{
    int[] b = { 9, 10, 5, 8 };
    changeA(b);
    for (int i = 0; i <= b.Length-1 ; i++)
        Console.WriteLine(b[i] + ",");
}
1 reference
static void changeA(int[] a)
{
    int t; int n;
    n = a.Length;
    for (int j = 0; j <= n-2; j++)
        if(a[j] > a[j + 1])
    {
        t = a[j];
        a[j] = a[j + 1];
        a[j + 1] = t;
    }
}
```

Microsoft Visual Studio Debug Console

```
9,
5,
8,
10,
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
de 0.
Press any key to close this window . . .
```

- 9,10,5,8
- 9,5,10,8,
- 10,9,8,5
- 9,5,8,10

Q15:

```
0 references
static void Main(string[] args)
{
    bool eq;
    int n = 3;int m = 4;
    eq = (g(n) + g(m) == g(m + n));
    Console.WriteLine(eq);
}
3 references
static int g(int x)
{
    int t = 4;
    return t = x;
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. It displays the output of the program execution. The output starts with "True" on a new line, followed by the path "C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\" and the code "ode 0.". At the bottom, there is a prompt "Press any key to close this window . . .".

- True
- False
- 0
- 1

Q16:

```
0 references
static void Main(string[] args)
{
    int i = 0, n = 13;
    while (i <= n)
    {
        if ((i % 4 == 0) && (i > 4))
            break;
        Console.WriteLine("i = " + i);
        i += 1;
    }
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. It displays the output of the program execution. The output shows the value of 'i' starting from 0 and increasing by 1 up to 7, with each value on a new line. The path "C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\" and the code "ode 0." are also present at the top, and a "Press any key to close this window . . ." prompt is at the bottom.

- 1 2 3 4 5 6 7 8 9 10 11 12 13
- 0 2 4 6 8 10 12
- 1 3 5 7 9 11 13
- 0 1 2 3 4 5 6 7

Q17:

```
0 references
static void Main(string[] args)
{
    for (int i = 0; i <= 13; i++)
    {
        if ((i % 4 == 0) && (i > 4))
            continue;
        Console.WriteLine("i = " + i);
    }
}
```

Microsoft Visual Studio Debug Console

```
i = 0
i = 1
i = 2
i = 3
i = 4
i = 5
i = 6
i = 7
i = 9
i = 10
i = 11
i = 13

C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\de 0.
```

- 1 2 3 4 5 6 7 9 10 11 12 13
- 0 1 2 3 4 5 6 7 8 9 10 11 12
- 0 1 2 3 4 5 6 7 9 10 11 12 13
- 0 1 3 5 7 9 10 11 13

Q18:

```
0 references
static void Main(string[] args)
{
    int N = 4, m, i;
    int[] b;
    b = new int[N];
    for (i = 0; i <= N - 1; i++)
        b[i] = 2 * i;
    m = 2;
    aMod(m, b);
    Console.Write(m + ":");
    for (i = 0; i <= N - 1; i++)
        Console.Write(b[i] + ",");
    Console.WriteLine();
}
1 reference
static void aMod(int k, int[] v)
{
    for (int i = 0; i <= v.Length - 1; i++)
        v[i] = v[i] % k;
    k = k + 2;
}
```

Microsoft Visual Studio Debug Console

```
2:0,0,0,0,
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\de 0.
Press any key to close this window . . .
```

- 10:0,0,0,0,
- 2:0,0,0,0,
- 2:1,1,1,1,
- 2:1,0,1,0,

Q19:

```
0 references
static void Main(string[] args)
{
    for (int k = 65; k <= 67; k++)
        Console.Write((char) k + ",");
    Console.WriteLine("\n");
}
```

Microsoft Visual Studio Debug Console
A,B,C,
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ode 0.
Press any key to close this window . . .

- A B C
- A,B,C
- C B A
- C,B,A

Q20:

ما نتيجة تنفيذ البرنامج التالي من أجل قيم الدخل التالية:

6 , 5 , 4 , 3 , -1

```
0 references
static void Main(string[] args)
{
    int total, gradeCounter, gradeValue;
    total = 0; gradeCounter = 0; gradeValue = 0;
    string Sn;

    do
    {
        total += gradeValue;
        Console.WriteLine("Enter Integer , -1 to Quit: ");
        Sn = Console.ReadLine(); gradeValue = int.Parse(Sn);
        gradeCounter++;
    } while (gradeValue != -1);

    if(gradeCounter != 1)
        Console.WriteLine((double)total / (gradeCounter-1));
}
```

Microsoft Visual Studio Debug Console
Enter Integer , -1 to Quit:
6
Enter Integer , -1 to Quit:
5
Enter Integer , -1 to Quit:
4
Enter Integer , -1 to Quit:
3
Enter Integer , -1 to Quit:
-1
4.5
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ode 0.
Press any key to close this window . . .

- 4.25
- 4
- (double)total / (gradeCounter-1)
- 4.5

Q21:

```
0 references
static void Main(string[] args)
{
    float x = 10;
    r(x, 2);
    Console.WriteLine(x);
}
1 reference
public static void r(float a , int k)
{
    a = a + k + k / 2;
}
```

Microsoft Visual Studio Debug Console

```
10
C:\Users\dell\source/repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ConsoleApp1.exe
ode 0.
Press any key to close this window . . .
```

- 10
- 10,2
- 13
- 17

Q22:

```
0 references
static void Main(string[] args)
{
    int x, y, g;
    x = 0; y = 15;

    while (x != y) {
        if (x > y)
            x = x - y;
        else
            y = y - x;
    }
    g = x;
    Console.WriteLine(g);
}
```

C:\Users\dell\source/repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ConsoleApp1.exe

infinite loop

- 1
- 13
- g
- حلقة لا نهائية



شرح التمارين:

دخلنا بحلقة لا نهائية في الكود السابق والسبب:

المتحولين x , y

$x = 0$, $y = 15$

شرط توقف الحلقة في حال تساوت قيمة x وقيمة y
عندما قمنا باختبار شرط الحلقة لاحظنا تحقق الشرط

لان $15 \neq 0$

دخلنا الى مضمون الحلقة

```
if (x > y)
    x = x - y;
else
    y = y - x;
```

في حال تحقق الشرط نفذ : $x = x - y$

وفي حال عدم تتحقق الشرط نفذ : $y = y - x$

نلاحظ ان الشرط غير متحقق

ننتقل الى تعليمات `else`

$y = y - x;$

$y = 15 - 0;$

$y = 15;$

نعود الى شرط الحلقة نلاحظ ان القيمتين التي تم تعويضهم في اختبار الشرط اول مرة هم نفس القيمتين في اختبار الشرط بالمرة الثانية

النتيجة : نلاحظ ان قيمة y لا تتغير وقيمة x لا تتغير اذاً شرط الحلقة لن يتم كسره وسندخل في حلقة لانهائية ولو اردنا التأكد نضع تعليمات طباعة داخل مضمون الحلقة لنرى ان الكود دخل في حلقة لا نهائية من طباعة المطلوب



The screenshot shows a Visual Studio IDE window. On the left is the code editor with the following C# code:

```

0 references
static void Main(string[] args)
{
    int x, y, g;

    x = 0; y = 15;

    while (x != y) {
        if (x > y)
            x = x - y;
        else
            y = y - x;

        Console.WriteLine(y);
    }
    g = x;
    Console.WriteLine(g);
}

```

The output window on the right shows the number 15 repeated 15 times, indicating an infinite loop. A red box highlights the word "infinite" and the word "loop" is also highlighted in red.

Q23:

The screenshot shows a Visual Studio IDE window. On the left is the code editor with the following C# code:

```

0 references
static void Main(string[] args)
{
    string s = "Hello";
    int L = s.Length;
    char[] tChar = new char[L];

    for (int i = 0; i <= L - 1; i++)
        tChar[i] = s[L - 1 - i];

    string r = "";

    for (int i = 0; i <= L - 1; i++)
        r += tChar[i];

    Console.WriteLine(r);
}

```

The output window on the right shows the output "olleH" followed by a prompt "Press any key to close this window . . ." and the path "C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1".

- olleH
- r
- Hello
- لا شيء

Q24:

```
static int n = 20;
0 references
static void Main(string[] args)
{
    pnx();
    pn();
    p();
    Console.WriteLine(" ");
}
1 reference
static void p()
{
    Console.Write(" " + n);
}
1 reference
static void pn()
{
    int n = 10; Console.Write(" " + n);
}
1 reference
static void pnx()
{
    n = 30; Console.Write(" " + n);
}
```

Microsoft Visual Studio Debug Console

30 10 30

C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1

ode 0.

Press any key to close this window . . .

- 10 30 30
- 30 30 10
- 30 30 30
- 30 10 30

Q25:

```
0 references
static void Main(string[] args)
{
    Console.WriteLine(g(4) + g(5) + " " + g(6));
}

5 references
static int g(int k)
{
    if ((k == 1) || (k == 2))
        return 1;
    else
        return g(k - 1) + g(k - 2);
}
```

Microsoft Visual Studio Debug Console

8 8

C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1

ode 0.

Press any key to close this window . . .

- 5 8
- 8 6
- 6 6
- 8 8

Q26:

The screenshot shows the Microsoft Visual Studio IDE. On the left, the code for Q26 is displayed in a code editor. On the right, the 'Microsoft Visual Studio Debug Console' window shows the program's output.

```
0 references
static void Main(string[] args)
{
    Console.Write(g(0,5) + ",");
    Console.Write(g(12,-6) + ",");
    Console.WriteLine(g(15,5));
    Console.WriteLine();
}

3 references
static int g(int a , int b)
{
    a = Math.Abs(a);b = Math.Abs(b);
    while (a!=0 && b!=0)
    {
        if (a > b)
            a = a % b;
        else
            b = b % a;
    }
    if (b == 0) return a; else return b;
}
```

Microsoft Visual Studio Debug Console

5,6,5
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\de 0.
Press any key to close this window . . .

- 6,5,6
- 5,6,5
- 5,6,1
- 1,5,6

Q27:

The screenshot shows the Microsoft Visual Studio IDE. On the left, the code for Q27 is displayed in a code editor. On the right, the 'Microsoft Visual Studio Debug Console' window shows the program's output.

```
0 references
static void Main(string[] args)
{
    int m , o ,e;
    m = 10; o = 0; e = 0;
    for (int i = 2; i < m; i++)
        if (m % i == 0)
    {
        if (i % 2 == 0)
            e = e + i;
        else
            o = o + i;
    }
    Console.WriteLine(e + " , " + o);
}
```

Microsoft Visual Studio Debug Console

2 , 5
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ode 0.
Press any key to close this window . . .

- 2,51
- 8,12
- 2,5
- 8,8

Q28:

```

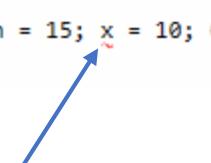
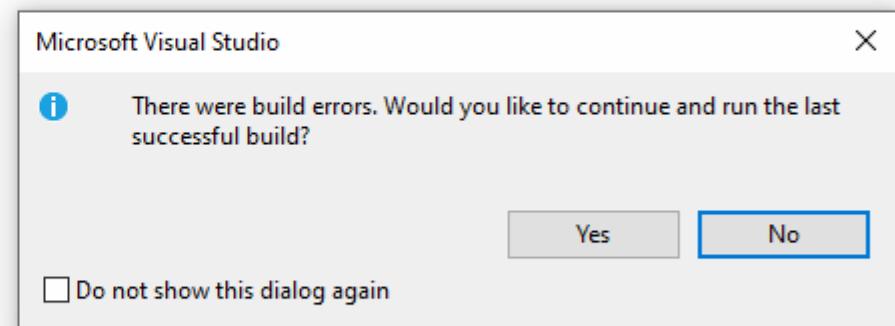
static void Main(string[] args)
{
    int n = 20;
    p();
    pn();
    p();
    pnx();
    p();
}

3 references
static void p()
{
    Console.WriteLine("in p()"+ n);
}

1 reference
static void pn()
{
    n = 5; Console.WriteLine("in pn()"+ n);
}

1 reference
static void pnx()
{
    n = 15; x = 10; Console.WriteLine("in pnx()"+ n);
}

```

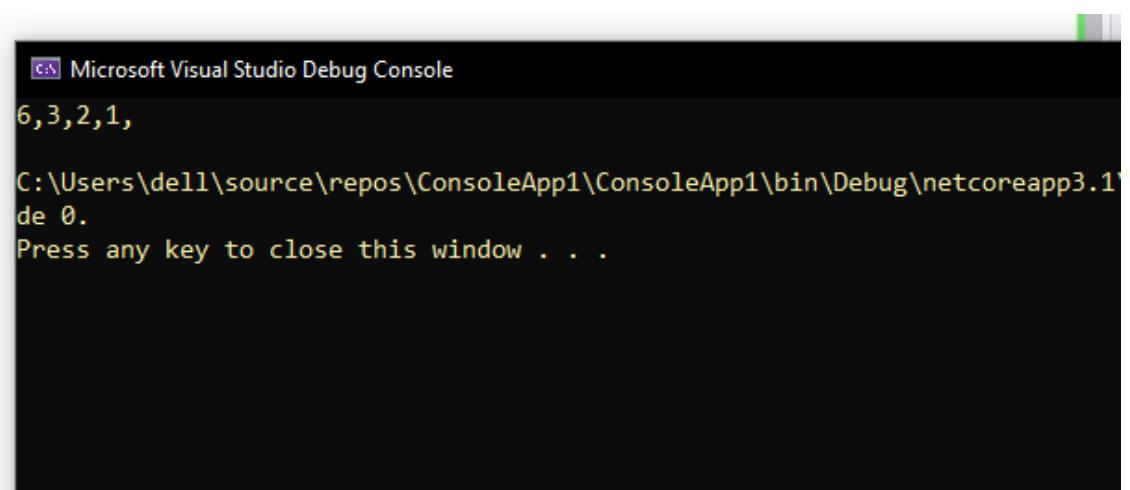



Q29:

```

0 references
static void Main(string[] args)
{
    int[] ai = new int[4];
    for (int m = 0; m <= 3; m++)
        ai[m] = 6 / (m + 1);
    for (int n = 0; n <= 3; n++)
        Console.WriteLine(ai[n] + ",");
    Console.WriteLine(" ");
}

```



- 0,0,0,1,
- 0,6,3,3
- 6,3,2,1
- ai[n]

Q30:

```
0 references
static void Main(string[] args)
{
    int x = 4, y = 2;
    int z = y-- * ++x;
    Console.WriteLine(x + "\t" + y + "\t" + z);
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is:
5 1 10
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.
Press any key to close this window . . .

- 5 1 10
- 10 1 5
- 8 4 2
- 2 4 8

Q31:

```
0 references
static void Main(string[] args)
{
    int n, i, s;
    n = 4;
    s = 0;
    i = 1;
    while (i <= n)
    {
        s = s + i * i;
        i++;
        Console.Write(s + " , ");
    }
    Console.WriteLine();
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is:
1 , 5 , 14 , 30 ,
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.
Press any key to close this window . . .

- 1 , 5 , 30 , 14
- 14 , 5 , 30 , 1
- 1 , 5 , 14 , 30
- 5 , 14 , 30 , 1

Q32:

```
0 references
static void Main(string[] args)
{
    int[] p = { 25, 55 };
    int[] x = { 35, 40 };
    bool r;
    for (int i = 0; i <= 1 ; i++)
    {
        r = (x[i] < 40 || (x[i] + p[i]) < 50);
        Console.WriteLine(r + " ,");
    }
    Console.WriteLine("\n");
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is:
True ,False ,
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
de 0.
Press any key to close this window . . .

- True , True
- False , True
- False , False
- True , False

Q33:

```
0 references
static void Main(string[] args)
{
    int nb = (int)'B';
    int k;
    for ( k = nb; k <= nb+2; k++)
        Console.WriteLine((char)(k+2) + ",");
    Console.WriteLine(" ");
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is:
D,E,F,
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.
Press any key to close this window . . .

- A,B,C
- B,C,D,
- Error
- D,E,F,

Q34:

```
0 references
static void Main(string[] args)
{
    double c, p;
    c = 25000;
    if (c < 10000)
        p = c * 0.10;
    else if (c < 20000)
        p = 1000 + (c - 10000) * 0.20;
    else
        p = 3000 + (c - 20000) * 0.30;

    Console.WriteLine(p);
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The console output is as follows:

```
Microsoft Visual Studio Debug Console
4500
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ode 0.
Press any key to close this window . . .
```

- 450
- 540
- 5400
- 4500

Q35:

```
0 references
static void Main(string[] args)
{
    bool equal;
    int n = 3; int m = 4;
    equal = (g(n) + g(m) == g(n+m));
    Console.WriteLine(equal);
}

3 references
static int g(int x)
{
    int t = 4;
    return t * x;
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The console output is as follows:

```
Microsoft Visual Studio Debug Console
True
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ode 0.
Press any key to close this window . . .
```

- True
- False
- equal
- $12 + 6 == 28$

Q36:

```
0 references
static void Main(string[] args)
{
    Console.WriteLine(sn2eq(3) + ",");
    Console.WriteLine(sn2eq(4));
}

2 references
static int sn2eq(int n)
{
    return n * (n + 1) * (2 * n + 1) / 6;
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The title bar says "Microsoft Visual Studio Debug Console". The console output is:
14,30
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ConsoleApp1.exe
Press any key to close this window . . .

- 14 , 30
- 3 , 4
- 4 , 3
- 30 , 4

Q37:

```
0 references
static void Main(string[] args)
{
    int[] sXam = { 60, 45, 55 };
    int[] sPract = { 20, 10, 4 };
    int n = sXam.Length;
    bool[] Failure = { true, true, true };
    for (int i = 0; i <= n - 1; i++)
        if ((sXam[i] >= 40) && (sXam[i] + sPract[i] >= 60))
            Failure[i] = !true;
    for (int i = 0; i <= n-1; i++)
        Console.Write(Failure[i] + ",");
    Console.WriteLine();
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The title bar says "Microsoft Visual Studio Debug Console". The console output is:
False,True,True,
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ConsoleApp1.exe
Press any key to close this window . . .

- True , False , False,
- False , True , True
- True , True , True
- False , False, False

دورة F20

Q38:

فليكن الخرج التالي: 6 , 10 , 110 , 14 , 15 , 0 , 26 , 8

ما هي القيم المقبولة من الخرج؟

```
0 references
static void Main(string[] args)
{
    Random rand = new Random();
    for (int i = 0; i <= 8 ; i++)
    {
        Console.WriteLine(rand.Next(15));
    }
}
```

Microsoft Visual Studio Debug Console

```
2
8
5
13
5
4
6
7
9
```

C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\

- 0, 10 , 15 , 6 , 8
- 10 , 14 , 15 , 26
- 0 , 6 , 110 , 8 , 14
- 6 , 10 , 14 , 0 , 8

 شرح التمرين:

التابع **Random** هو تابع لتوليد ارقام / احرف بشكل عشوائي
في الكود السابق سنقوم بـتوليد 8 ارقام حسب شرط الحلقة **for** حيث ان مجال الأرقام من

[0 ,15[

والرقم 15 مجال مفتوح لا نقوم بأخذة

أي الأرقام التي ستظهر هي: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

بشكل عشوائي

Q39:

```
0 references
static void Main(string[] args)
{
    int i = 5;
    int x = ++i;
    int y = i++;
    Console.WriteLine(x + " " + y);
}
```

Microsoft Visual Studio Debug Console
6 6
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.
Press any key to close this window . . .

- 5 6
- 6 5
- 5 5
- 6 6

Q40:

أي من التالي لا يصلح للاستخدام ان يكون اسم متغير:

- INT
- double
- _xy
- _3c
- float
- e(4)

```
0 references
static void Main(string[] args)
{
    int INT = 4;
    int double = 5;
    int _xy = 6;
    int _3c = 10;
    int float = 15;
    int e(4) = 20;
}
```

كلمة محفوظة ← int double = 5;
كلمة محفوظة ← int float = 15;
 يوجد رمز () ← int e(4) = 20;

Q41:

```
0 references
static void Main(string[] args)
{
    int i , j = 0;

    for (i = 0; i <= 10 ; i++)
    {
        for (j = 0; j <= 10 ; j++)
        {
        }
    }
    Console.WriteLine(i + " " + j);
}
```

Microsoft Visual Studio Debug Console

```
11 11
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.
Press any key to close this window . . .
```

- 11 11
- 10 11
- 11 10
- 10 10

Q42:

```
3 references
static int rec (int n)
{
    if (n < 3)
    {
        return 1;
    }
    else
    {
        return n * rec(n - 2);
    }
}
0 references
static void Main(string[] args)
{
    Console.WriteLine(rec(7) + " " + rec(8));
}
```

Microsoft Visual Studio Debug Console

```
105 192
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.
Press any key to close this window . . .
```

- 7 8
- 185 192
- 8 7
- 35 291

Q43:

```
0 references
static void Main(string[] args)
{
    int[,] a =
    {
        { 1, 2, 3, 4 }, { 4, 3, 2, 1 }, { 2, 1, 4, 3 }
    };

    int s = 0;

    for (int i = 0; i < 3; i++)
    {
        for (int j = 0; j < 3; j++)
        {
            if(a[i,j] > 2)
            {
                s += a[i, j];
            }
        }
    }

    Console.WriteLine(s);
}
```

Microsoft Visual Studio Debug Console

14
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.
Press any key to close this window . . .

- 28
- 12
- 15
- 14

Q44:

```
0 references
static void Main(string[] args)
{
    int[] a = { 1, 5, 6, 8, 1, 2, 10, 50, 30, 600, -4, 1, 200, 600, 200, 30 };
    int x = a[0];
    int i = 0;
    for (int j = 0; j < a.Length; j++)
    {
        if(a[j] < x)
        {
            x = a[j];
            i = x;
        }
    }

    Console.WriteLine(i);
}
```

Microsoft Visual Studio Debug Console

-4
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1
ode 0.
Press any key to close this window . . .

- 1
- 0
- -4
- 6

Q45:

```
0 references
static void Main(string[] args)
{
    int src, result, a, b, c, d;
    src = 9147;
    a = src % 10;
    b = src / 10%10;
    c = src / 100 % 10;
    d = src / 1000;
    result = a * 1000 + b * 100 + c * 10 + d;
    Console.WriteLine(result + " ");

    a = (a + 4) % 10;
    b = (b + 4) % 10;
    c = (c + 4) % 10;
    d = (d + 4) % 10;
    result = d * 100 + c * 1000 + a * 10 + b;
    Console.WriteLine(result);
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is as follows:

```
Microsoft Visual Studio Debug Console
7419 5318
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\
ode 0.
Press any key to close this window . . .
```

- 9147 8135
- 7419 5318
- 5318 7419
- 8135 9147

Q46:

```
0 references
static void Main(string[] args)
{
    int[] x = { 1, 2, 3, 4, 5, 6 };
    int[] y = { 10, 20, 30, 40, 50, 60 };
    SwapArray(x, y);
    Console.WriteLine(x[0] + " " + y[0]);
}
1 reference
static void SwapArray(int[] a, int[] b)
{
    for (int i = 0; i < a.Length; i++)
    {
        int z = a[i];
        a[i] = b[i];
        b[i] = z;
    }
}
```

The screenshot shows the Microsoft Visual Studio Debug Console window. The output is as follows:

```
Microsoft Visual Studio Debug Console
10 1
C:\Users\dell\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\
ode 0.
Press any key to close this window . . .
```

- 10 1
- 10 10
- 1 8
- 9 2

Q47:

```
0 references
static void Main(string[] args)
{
    int n = 8;
    for (int i = 1; i <= n; i++)
    {
        for (int j = 1; j <= n ; j++)
        {
            if(j==1 || j==i || j == n)
            {
                Console.WriteLine(" * ");
            }
            else
            {
                Console.WriteLine("   ");
            }
        }
        Console.WriteLine();
    }
}
```

- Y
- M
- N
- E

نماذج من كورس يزن

N1 : https://docs.google.com/forms/d/e/1FAIpQLScKMUHDM8_5b9QRZJxbvA4ly1rwdhz9blvHWjYKHsdWRwMlow/viewform?usp=sf_link

N2 : https://docs.google.com/forms/d/e/1FAIpQLSdBwXxINgBts6GDe24fZDjNk9o4CqKREJznms-GQ0WrVTjeAQ/viewform?usp=sf_link

N3 : https://docs.google.com/forms/u/1/d/1A6cWLw1-5Zjx6PltK_o5CYNfOYaoOV8fDepjm7eieqQ/edit?usp=forms_home

N4 : <https://docs.google.com/forms/d/127lo6kYqzKwA72gE7Scgoxbe2vKkaxwr331P89wSuUI/edit>

N5 : https://docs.google.com/forms/d/e/1FAIpQLSdS8c4TF_ltGrkxRo-U6k9UE3afeqCE1Q5-VwrjU-sJccclQ/viewform?usp=sf_link

N6 : https://docs.google.com/forms/d/e/1FAIpQLSf-a1kN9vvSdu5sA37CQ2VrtHQULTelgDAImDIMsGGRGIczLw/viewform?usp=sf_link

N7 : https://docs.google.com/forms/d/e/1FAIpQLSebdm7ZYY6ljGV51RRhrE4GYtbqczOkyYI9_ih9rYcbOQApq/viewform?usp=sf_link

N8 : https://docs.google.com/forms/d/e/1FAIpQLSf9v8W15ImXwHOEJ9bbBxkDqUyxmJr8zs7YY9gnB75QEFMyUg/viewform?usp=sf_link

N9 : https://docs.google.com/forms/d/e/1FAIpQLSfOy1zxdyiC1I30VYieqkLIZKnBNJIHqSi-fAwwVqgCr4cbQ/viewform?usp=sf_link

N10 : https://docs.google.com/forms/d/e/1FAIpQLScEEzvUhDe7SMAyh2ngmAEHOhmLa1j8lrHLESMA0Me_mHMr1Q/viewform?usp=sf_link

اختبار النصف الأول من المقرر:

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بالتوفيق للجميع