

STRING MANIPULATION

PSEUDOCODE

LEN()

$N \leftarrow \text{LEN}(X)$ 20

It counts characters in a string.

Output is an integer.

LEFT()

$M \leftarrow \text{LEFT}(X, 5)$

"Nixoy"

Returns the extracted string starting from left first character to the mentioned Number.
Output is string.

RIGHT()

$M \leftarrow \text{RIGHT}(X, 7)$

"College"

Right counts characters from the right side and shows result left to right. output is string.

VB.net SOURCE CODE

Len()

$n = \text{Len}(X)$ 20

Left()

$m = \text{Left}(X, 5)$

"Nixoy"

Right()

$m = \text{Right}(X, 7)$

"College"

RIGHT() function counts and works from right but shows data from left.

$X = \text{"Nixoy School College"}$

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

All of the functions except RIGHT() function counts & judge string from left side.



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MID()
 $m \leftarrow \text{MID}(x, 7, 6)$
 "School"

MID picks up characters from 2nd argument position to the number of characters given in 3rd argument. It picks up characters from any location and may be used as a substitute of LEFT() & RIGHT().

Locate()
 $n \leftarrow \text{Locate}(x, \text{"School"})$
 7

$n \leftarrow \text{Locate}(9, x, 'O')$ 10

Searches for the characters given in argument in another string. Always starts from left to right. Returns an integer starting position of the pattern.

VB.net SOURCE CODE

Mid()
 $m = \text{Mid}(x, 7, 6)$
 "School"

RIGHT() function counts and works from right but shows data from left.

$x = \text{"Nixon School College"}$
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

All of the functions except RIGHT() function counts & judge string from left side.

InStr()
 $n = \text{InStr}(x, "O")$
 4

$n = \text{InStr}(9, x, "O")$ 10

When locate or Instr doesn't find the pattern, it returns zero (0).



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ASC()
n ← ASC('A')
65

Return an ASCII integer of the provided character.

VB.net SOURCE CODE

ASC()
n = ASC("B")
66

RIGHT() function counts and works from right but shows data from left.

x = "Nixoy School College"
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

All of the functions except RIGHT() function counts & judge string from left side.

CHAR()
m ← CHAR(65) 'A'

Return a character glyph of the provided ASCII code.

CHR()
m = CHR(67) 'C'

Concatenation :
(String Merge) &
FN = "Zafar Ali"
LN = "khan"
FullName = FN & LN
FullName = "Zafar Ali Khan"

STR()
Converts
INT, REAL
& CURRENCY
to String.

VAL()
Converts
numbers in
string form
to INT, REAL
or CURRENCY.

STR()
Converts
INT, DECIMAL,
SINGLE etc.
to String.

VAL()
Converts & Casts
numbers in string
form to their equivalent
in INT, DECIMAL
and SINGLE etc.



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STRING MANIPULATION

PSEUDOCODE

UPPER()
 $m \leftarrow \text{UPPER}(x)$
 $m \leftarrow \text{"NIXOR SCHOOL COLLEGE"}$
 Converts any string
 equivalent.

LOWER()
 $m \leftarrow \text{LOWER}(x)$
 $m \leftarrow \text{"nixor school college"}$
 Converts any string
 equivalent.

VB.net SOURCE CODE

UCASE()
 $m = \text{UCASE}(x)$
 $m = \text{"NIXOR SCHOOL COLLEGE"}$
 to its upper case

LCASE()
 $m = \text{LCASE}(x)$
 $m = \text{"nixor school college"}$
 to its lower case

RIGHT() function counts and works
 from right but shows data
 from left.

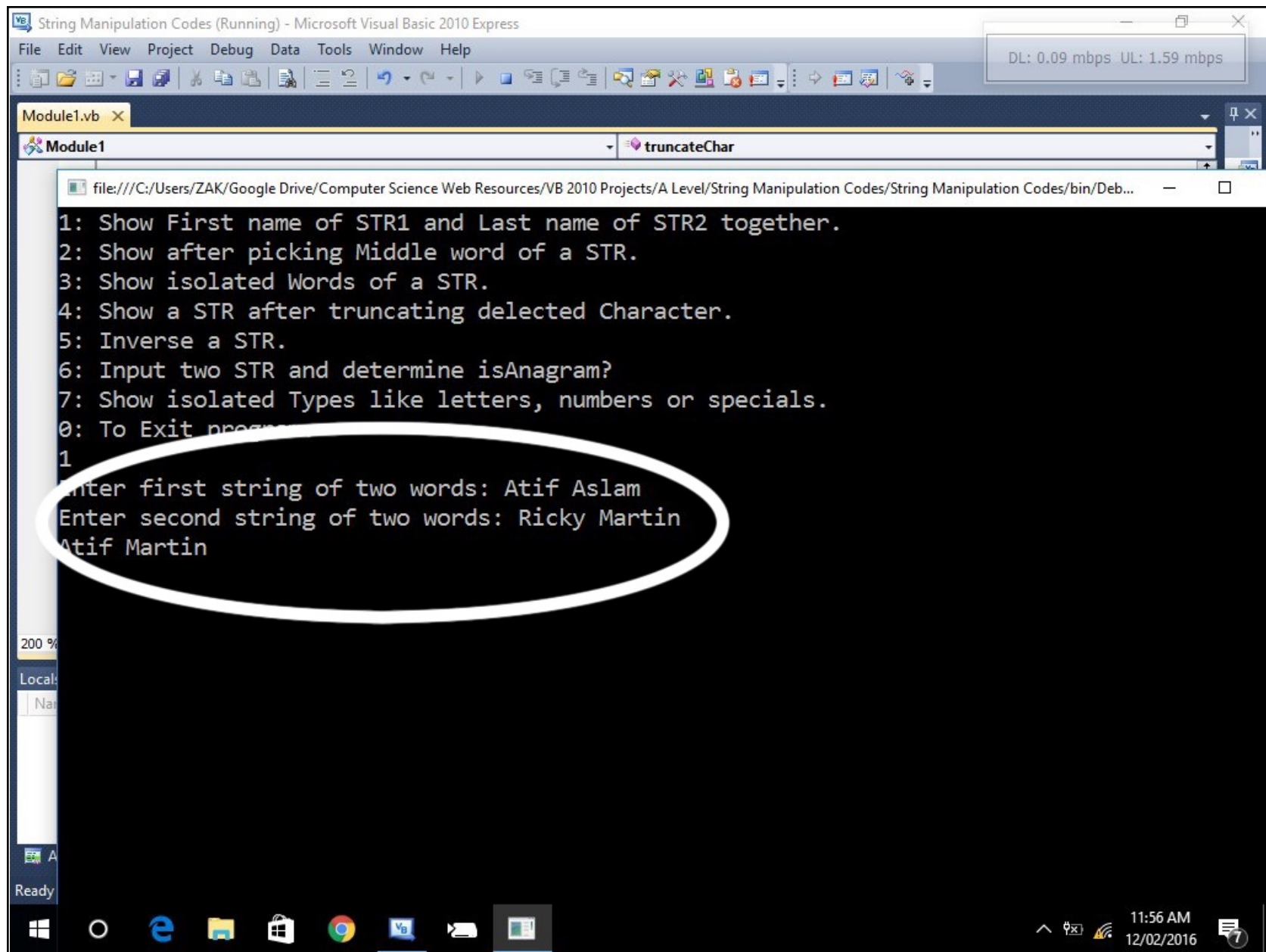
$x = \text{"Nixor School College"}$
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

All of the functions except
 RIGHT() function counts &
 judge string from left side.

Concatenation :
 (String Merge) &
 $\text{FN} = \text{"ZaFar Ali"}$
 $\text{LN} = \text{"khan"}$
 $\text{FullName} = \text{FN} \& \text{LN}$
 $\text{FullName} = \text{"ZaFar AliKhan"}$



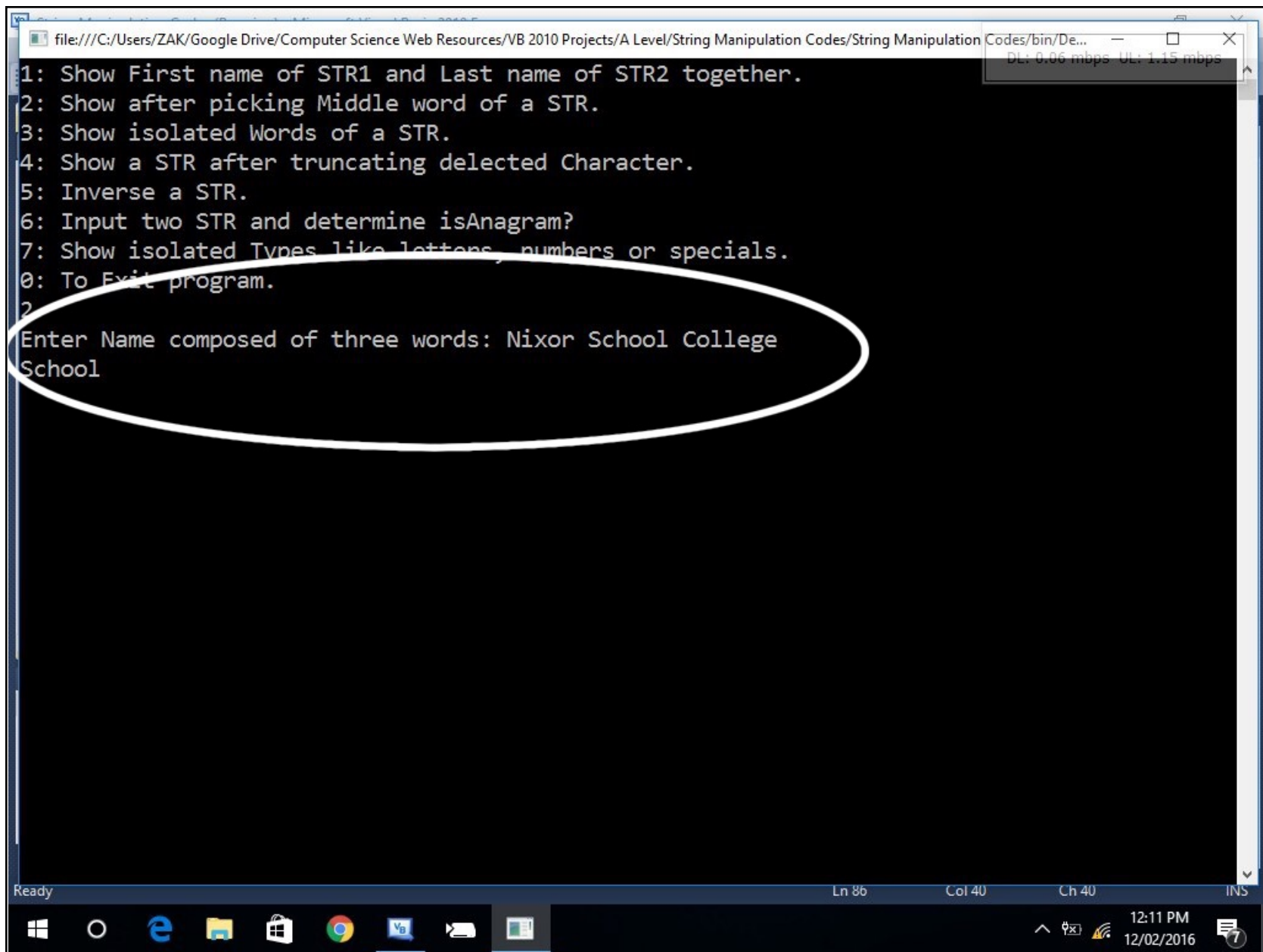
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The screenshot shows the Microsoft Visual Basic 2010 Express IDE with a running application. The application window displays a list of tasks for string manipulation. A white oval highlights the input section where the user has entered two strings: "Atif Aslam" and "Ricky Martin". The output shows the concatenated result "Atif Martin".

```
String Manipulation Codes (Running) - Microsoft Visual Basic 2010 Express
File Edit View Project Debug Data Tools Window Help
Module1.vb
Module1 truncateChar
file:///C:/Users/ZAK/Google Drive/Computer Science Web Resources/VB 2010 Projects/A Level/String Manipulation Codes/String Manipulation Codes/bin/Deb...
1: Show First name of STR1 and Last name of STR2 together.
2: Show after picking Middle word of a STR.
3: Show isolated Words of a STR.
4: Show a STR after truncating deleted Character.
5: Inverse a STR.
6: Input two STR and determine isAnagram?
7: Show isolated Types like letters, numbers or specials.
0: To Exit program
1
Enter first string of two words: Atif Aslam
Enter second string of two words: Ricky Martin
Atif Martin
200 %
Local:
Name:
Ready
Windows Taskbar: 11:56 AM 12/02/2016
```

```
String Manipulation Codes - Microsoft Visual Basic 2010 Express
File Edit View Project Debug Data Tools Window Help
DL: 12.9 kbps UL: 187.7 kbps
Start Page Module1.vb
Module1 truncateChar
FirstLast()
Dim STR1, STR2, firstName, secondName As String
Dim SpacePos, lenSTR As Integer
Console.WriteLine("Enter first string of two words: ")
STR1 = Console.ReadLine() "Atif Aslam"
Console.WriteLine("Enter second string of two words: ")
STR2 = Console.ReadLine() "Ricky Martin"
SpacePos = InStr(STR1, " ") 5
✓ firstName = Left(STR1, SpacePos - 1) "Atif"
SpacePos = InStr(STR2, " ") 6
lenSTR = Len(STR2) 12
✓ secondName = Right(STR2, lenSTR - SpacePos) "Martin"
Console.WriteLine(firstName & "↓" & secondName) "Atif Martin"
Console.ReadKey()
Sub
```

```
file:///C:/Users/ZAK/Google Drive/Computer Science Web Resources/VB 2010 Projects/A Level/String Manipulation Codes/String Manipulation Codes/bin/De...
DL: 0.06 mbps UL: 1.15 mbps

1: Show First name of STR1 and Last name of STR2 together.
2: Show after picking Middle word of a STR.
3: Show isolated Words of a STR.
4: Show a STR after truncating deleted Character.
5: Inverse a STR.
6: Input two STR and determine isAnagram?
7: Show isolated Types like letters, numbers or specials.
8: To Exit program.
2
Enter Name composed of three words: Nixor School College
School
```

Ready Ln 86 Col 40 Ch 40 INS

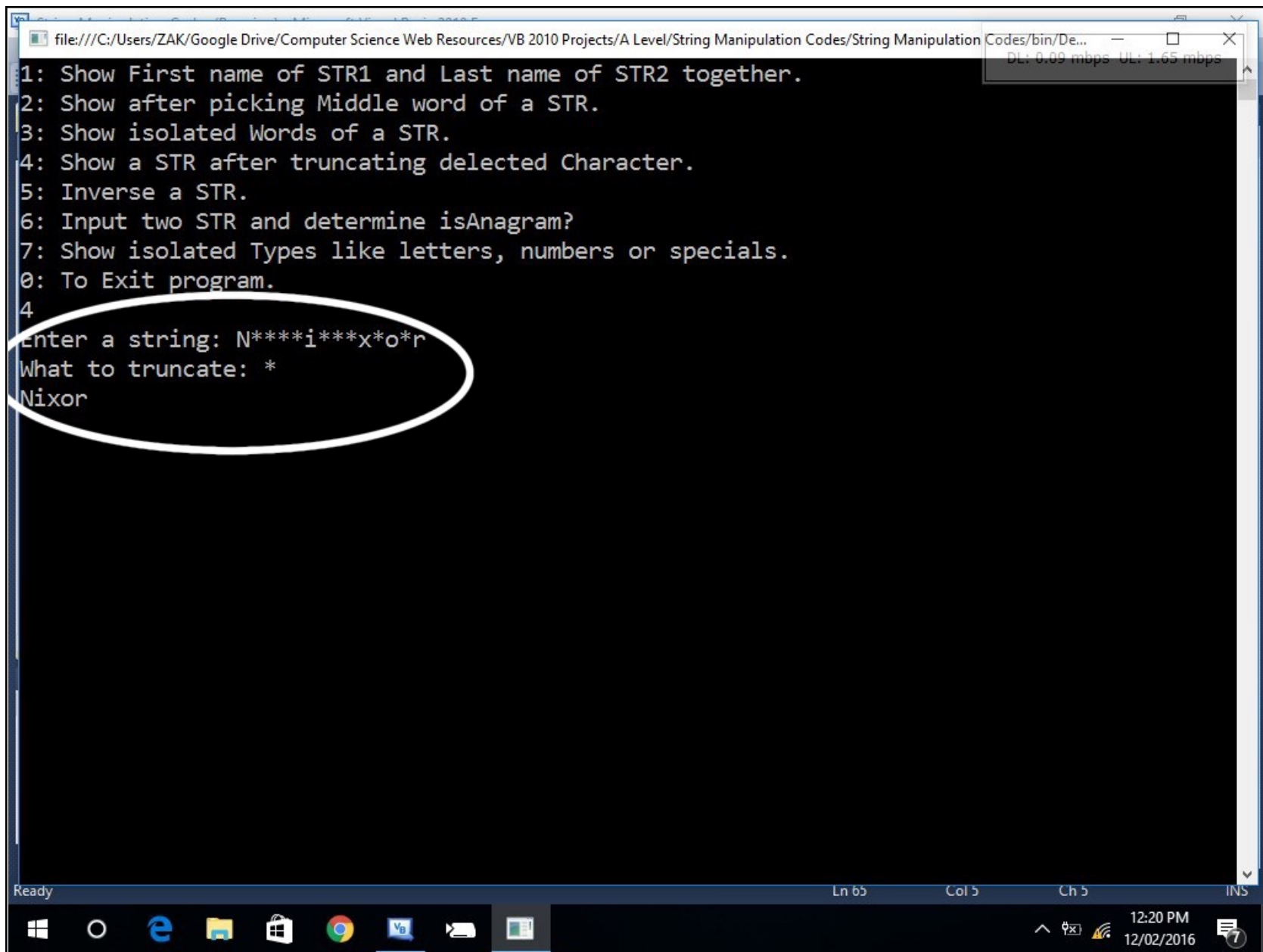
12:11 PM 12/02/2016

```
String Manipulation Codes - Microsoft Visual Basic 2010 Express
File Edit View Project Debug Data Tools Window Help
DL: 0.45 mbps UL: 21.25 mbps
Start Page Module1.vb* X
Module1 (Declarations)
pickMiddle()
Dim STR1, middleName As String
Dim SpacePos1, SpacePos2 As Integer
Console.WriteLine("Enter Name composed of three words: ")
STR1 = Console.ReadLine()
SpacePos1 = InStr(STR1, " ")
SpacePos2 = InStr(SpacePos1 + 1, STR1, " ")
middleName = Mid(STR1, SpacePos1 + 1, SpacePos2 - SpacePos1 - 1)
Console.WriteLine(middleName)
Console.ReadKey()
Sub
```

Handwritten annotations in red:

- String: "Nixor School College"
- Index 6 is marked below the first space.
- Index 13 is marked below the second space.
- Calculation: $13 - 6 - 1 = 6$ is shown, with the result 6 boxed.
- The word "School" is written below the calculation.
- Index 7 is boxed next to the `Console.WriteLine(middleName)` line.

Bottom status bar: Ready, Ln 65, Col 5, Ch 5, INS, 12:16 PM, 12/02/2016

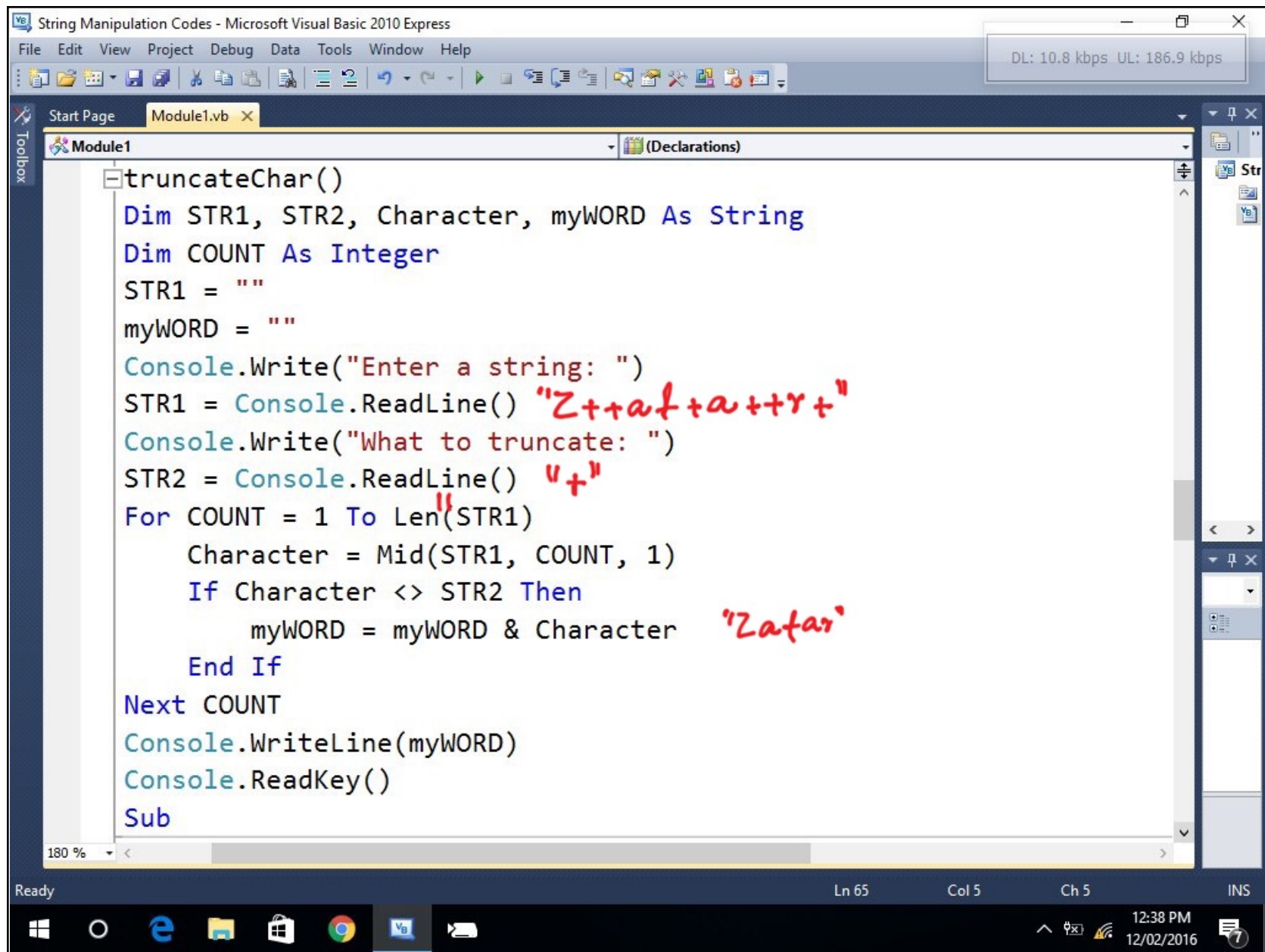


```
file:///C:/Users/ZAK/Google Drive/Computer Science Web Resources/VB 2010 Projects/A Level/String Manipulation Codes/String Manipulation Codes/bin/De...
DL: 0.09 mbps UL: 1.65 mbps

1: Show First name of STR1 and Last name of STR2 together.
2: Show after picking Middle word of a STR.
3: Show isolated Words of a STR.
4: Show a STR after truncating deleted Character.
5: Inverse a STR.
6: Input two STR and determine isAnagram?
7: Show isolated Types like letters, numbers or specials.
0: To Exit program.
4
Enter a string: N****i***x*o*r
What to truncate: *
Nixon
```

Ready Ln 65 Col 5 Ch 5 INS

12:20 PM 12/02/2016



```
String Manipulation Codes - Microsoft Visual Basic 2010 Express
File Edit View Project Debug Data Tools Window Help
DL: 10.8 kbps UL: 186.9 kbps
Start Page Module1.vb
Module1 (Declarations)
truncateChar()
Dim STR1, STR2, Character, myWORD As String
Dim COUNT As Integer
STR1 = ""
myWORD = ""
Console.WriteLine("Enter a string: ")
STR1 = Console.ReadLine() "Z++a++a++r++"
Console.WriteLine("What to truncate: ")
STR2 = Console.ReadLine() "+"
For COUNT = 1 To Len(STR1)
    Character = Mid(STR1, COUNT, 1)
    If Character <> STR2 Then
        myWORD = myWORD & Character "Za+ar"
    End If
Next COUNT
Console.WriteLine(myWORD)
Console.ReadKey()
Sub
```

b = VAL(a)

a = "123" 123

a = "123 2AK" 123

a = "123 567" 123567

a = "123.45" 123.45

a = "12 34 5" 12345

a = "12 2AK 34" 12

STR INT

