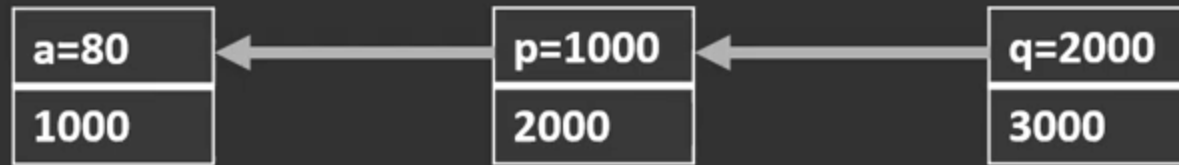


Representation of Double pointer ...

1. `Int a = 80;`
2. `Int *p = &a;`
3. `Int **q = &p;`



****q explanation:**

- `*q` will give the value at location 2000, which is 1000.
- `**q` will give the value at location 1000, which is 80



Hey, `a` is a variable stored at 1000 location, `p` is a pointer which contains the address of a variable and `q` is a double pointer which contains the address of `p` pointer.

Value of `**q` = 80
Value of `*p` = 80
Value of `a` = 80
Value of `p` = 1000
Value of `q` = 3000
Value of `&a` = 1000

Example ...

```
// C program to demonstrate pointer to pointer
int main()
{
    int var = 789;

    // pointer for var
    int *ptr2;

    // double pointer for ptr2
    int **ptr1;

    // storing address of var in ptr2
    ptr2 = &var;

    // Storing address of ptr2 in ptr1
    ptr1 = &ptr2;

    // Displaying value of var using
    // both single and double pointers
    printf("Value of var = %d\n", var );
    printf("Value of var using single pointer = %d\n", *ptr2 );
    printf("Value of var using double pointer = %d\n", **ptr1);

    return 0;
}
```

Var=789	Ptr2 = 1000	Ptr1=2000
1000	2000	3000

Output:

Var = 789

*ptr2 = 789

**ptr1 = 789

FileHomeInsertDesignTransitionsAnimationsSlide ShowReviewViewHelpStoryboardingTell me what you want to do

Paste

CutCopyFormat Painter



Clipboard

LayoutResetSection





New Slide







Slides

18A[^]A_^

BBIUSAV_↔Aa-

Font


















Text Direction

Align Text

Convert to SmartArt

Paragraph

Shape Fill

Shape Outline

Shape Effects

Drawing

FindReplaceSelect


Editing

Dictate

Voice

ShareComments


1



Double Pointer in C


2

Representation of Double pointer ...




3

Example ...



4



Thank you for watching!

Example ...

```
// C program to demonstrate pointer to pointer
int main()
{
    int var = 789;

    // pointer for var
    int *ptr2;

    // double pointer for ptr2
    int **ptr1;

    // storing address of var in ptr2
    ptr2 = &var;

    // Storing address of ptr2 in ptr1
    ptr1 = &ptr2;

    // Displaying value of var using
    // both single and double pointers
    printf("Value of var = %d\n", var );
    printf("Value of var using single pointer = %d\n", *ptr2 );
    printf("Value of var using double pointer = %d\n", **ptr1);

    return 0;
}
```

Var=789	Ptr2 = 1000	Ptr1=2000
1000	2000	3000

Output:

Var = 789

*ptr2 = 789

**ptr1 = 789

Click to add notes

Cut

Copy

Paste

Format Painter

New

Reset

Layout

Section

18

A⁺

A⁻

B

I

U

S

AV

Aa

Font

Text Direction

Align Text

Convert to SmartArt

Shape Fill

Shape Outline

Shape Effects


Find

Replace

Select

Dictate


1



basic.cpp

```
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
```

2



Example ...

```
// C program to demonstrate pointer to pointer
int main()
{
    int var = 789;

    // pointer for var
    int *ptr2;

    // double pointer for ptr2
    int **ptr1;


    // storing address of var in ptr2
    ptr2 = &var;

    // Storing address of ptr2 in ptr1
    ptr1 = &ptr2;

    // Displaying value of var using
    // both single and double pointers
    printf("Value of var = %d\n", var );
    printf("Value of var using single pointer = %d\n", *ptr2 );
    printf("Value of var using double pointer = %d\n", **ptr1);


    return 0;
}
```

3



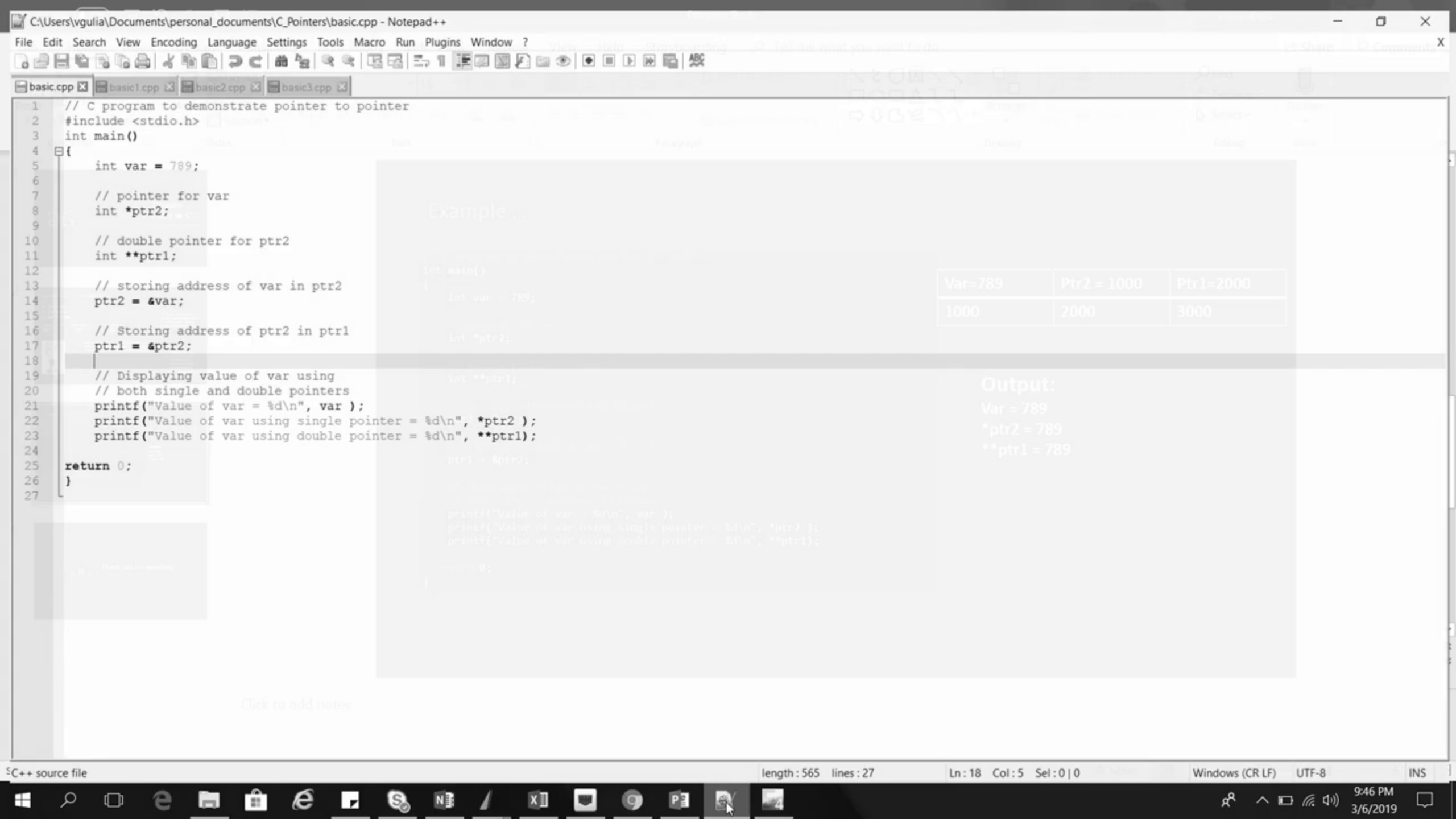
Var=789	Ptr2 = 1000	Ptr1=2000
1000	2000	3000

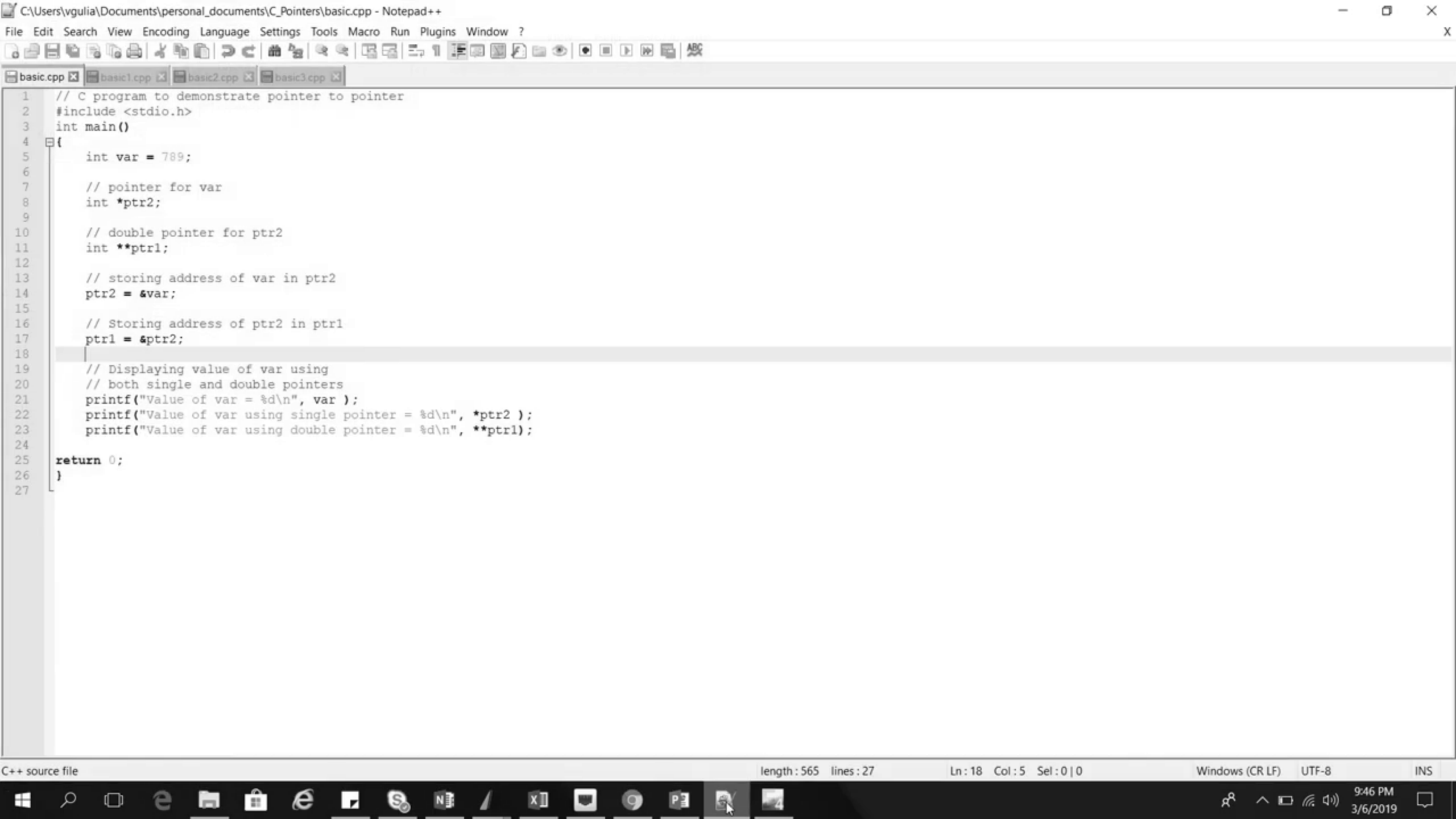
4



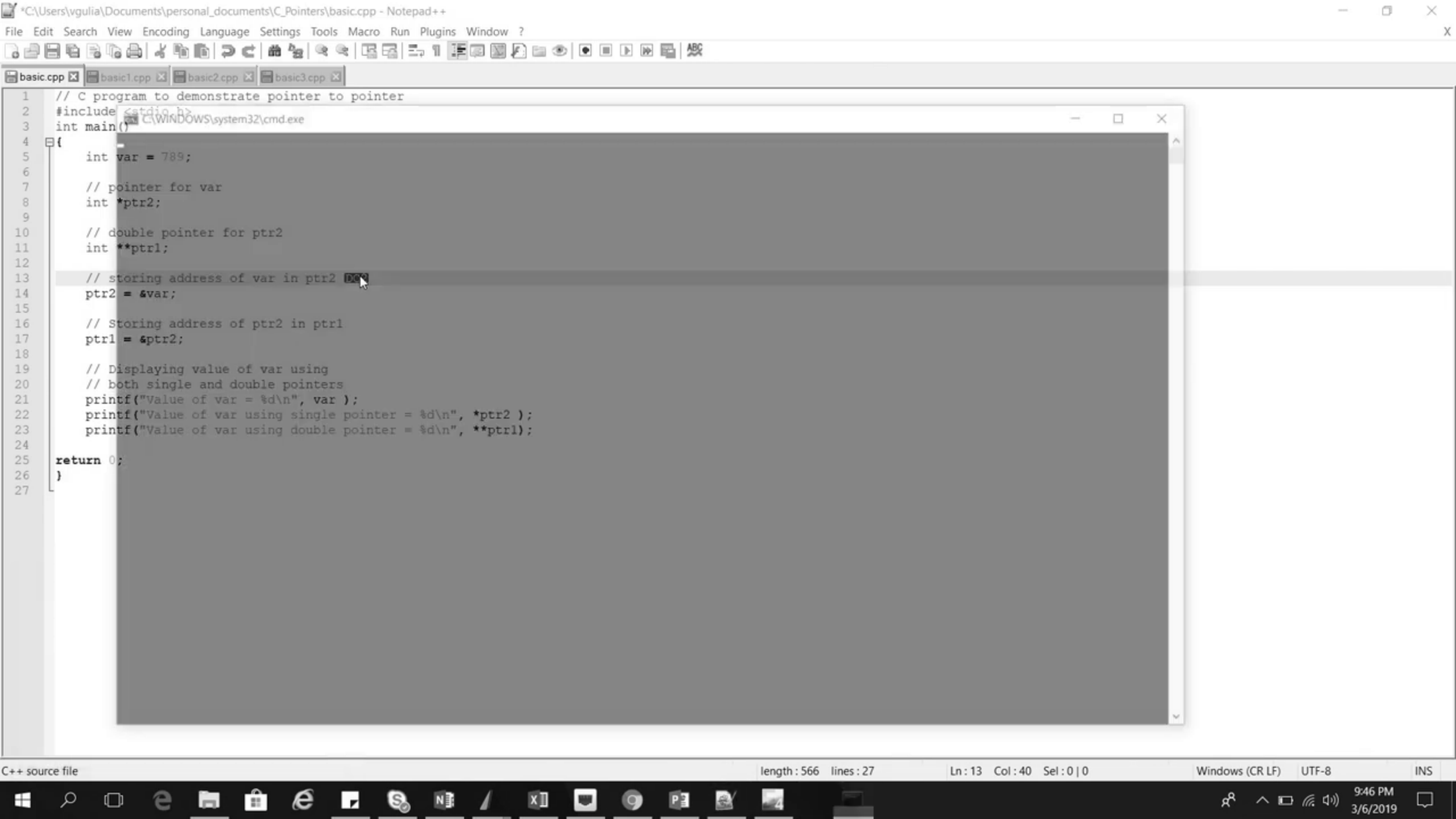
Thank you for watching!

Click to add notes

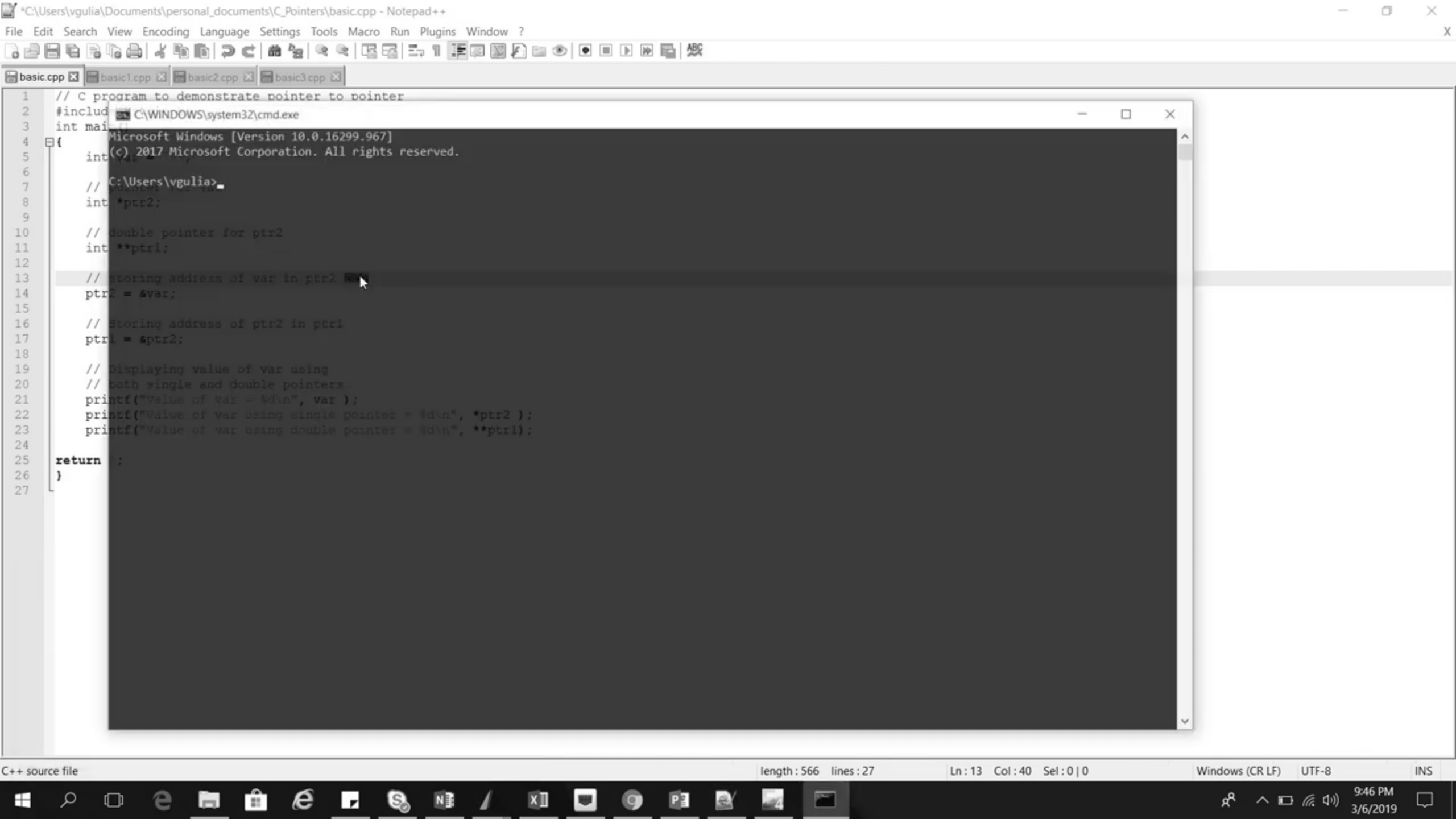


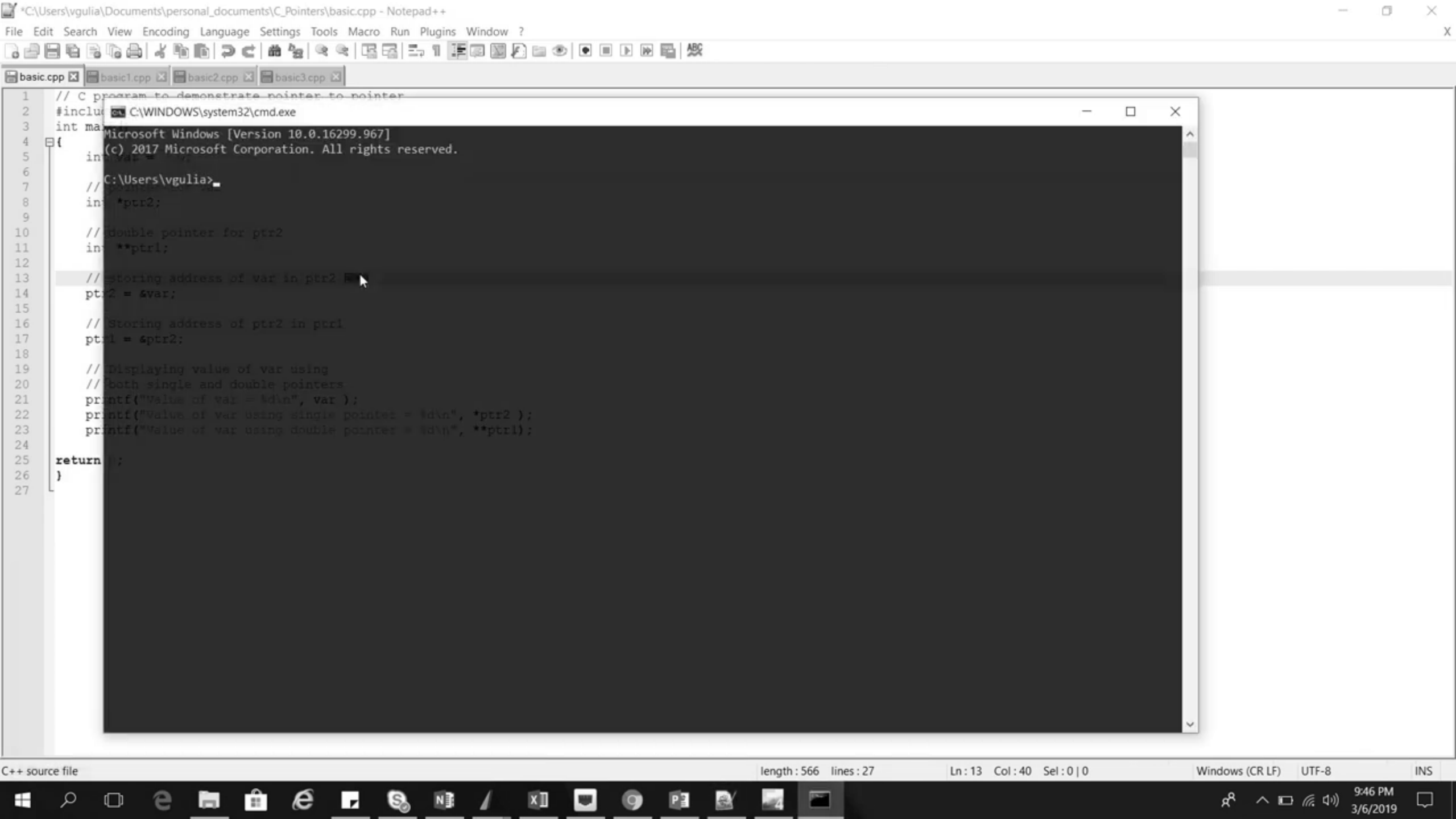


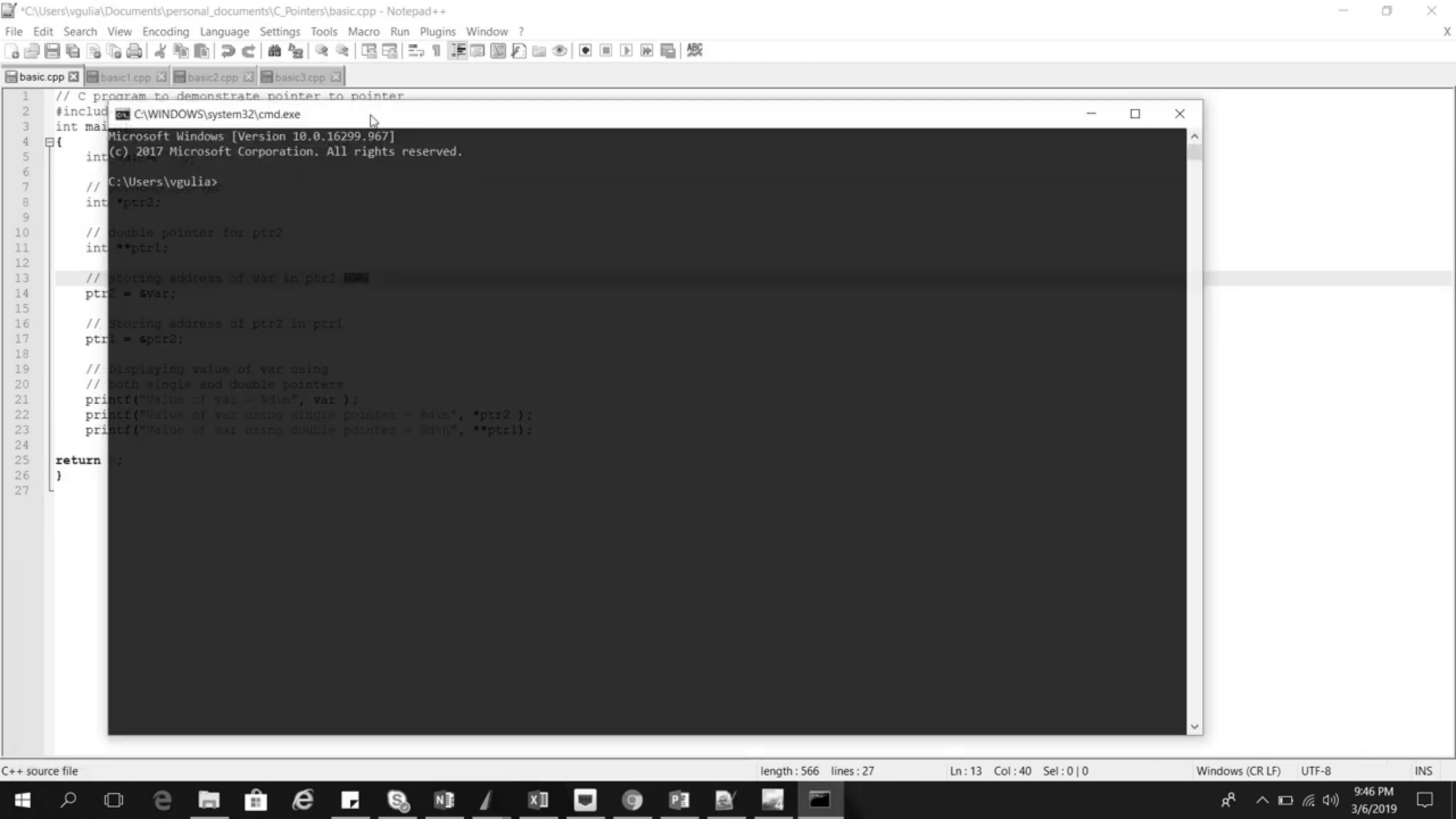
```
C:\Users\vgulia\personal_documents\C_Pointers\basic.cpp - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
basic.cpp basic1.cpp basic2.cpp basic3.cpp
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
C++ source file
length: 565 lines: 27
Ln: 18 Col: 5 Sel: 0 | 0
Windows (CR LF) UTF-8 INS
9:46 PM 3/6/2019
```

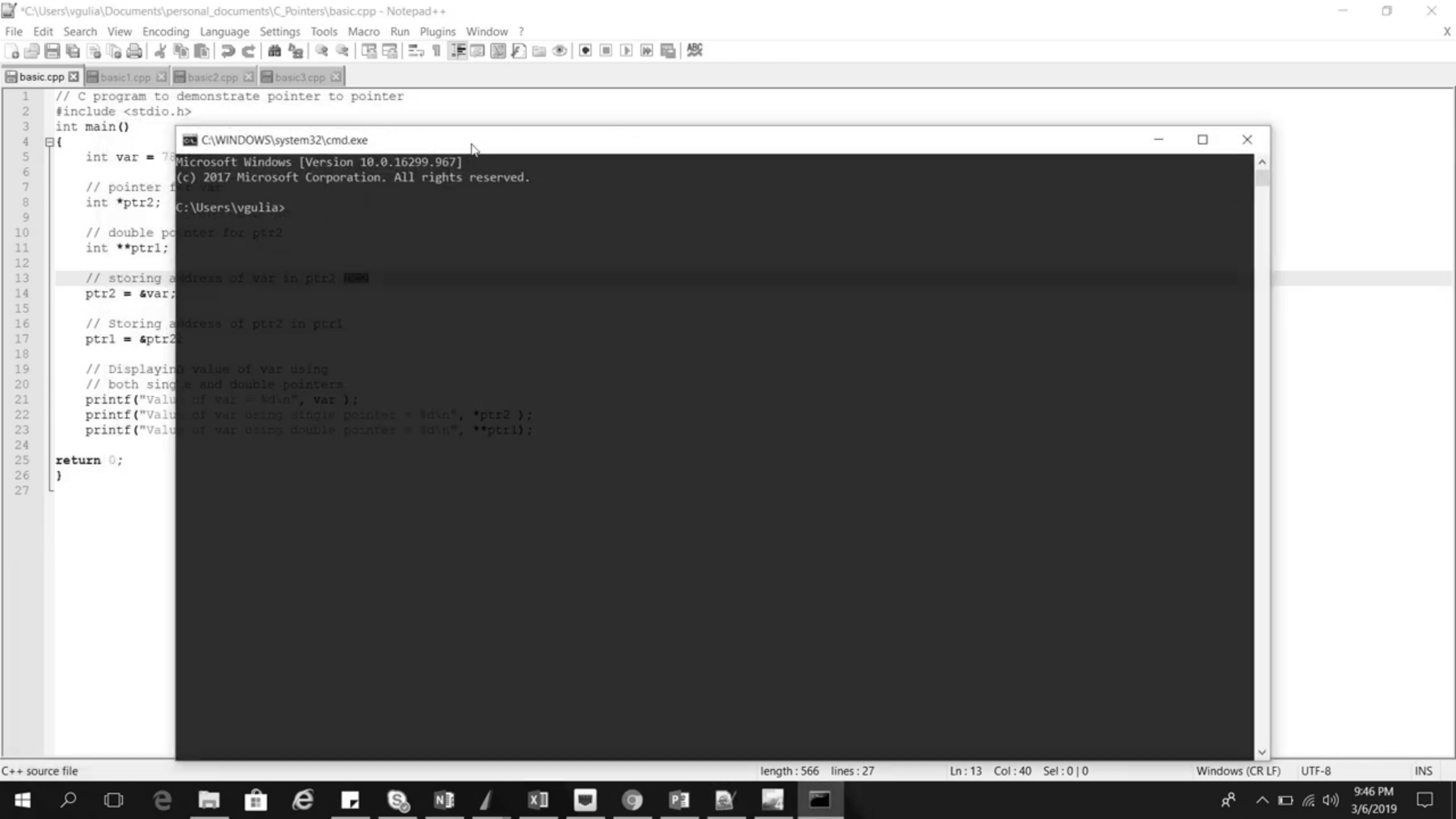


```
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
```









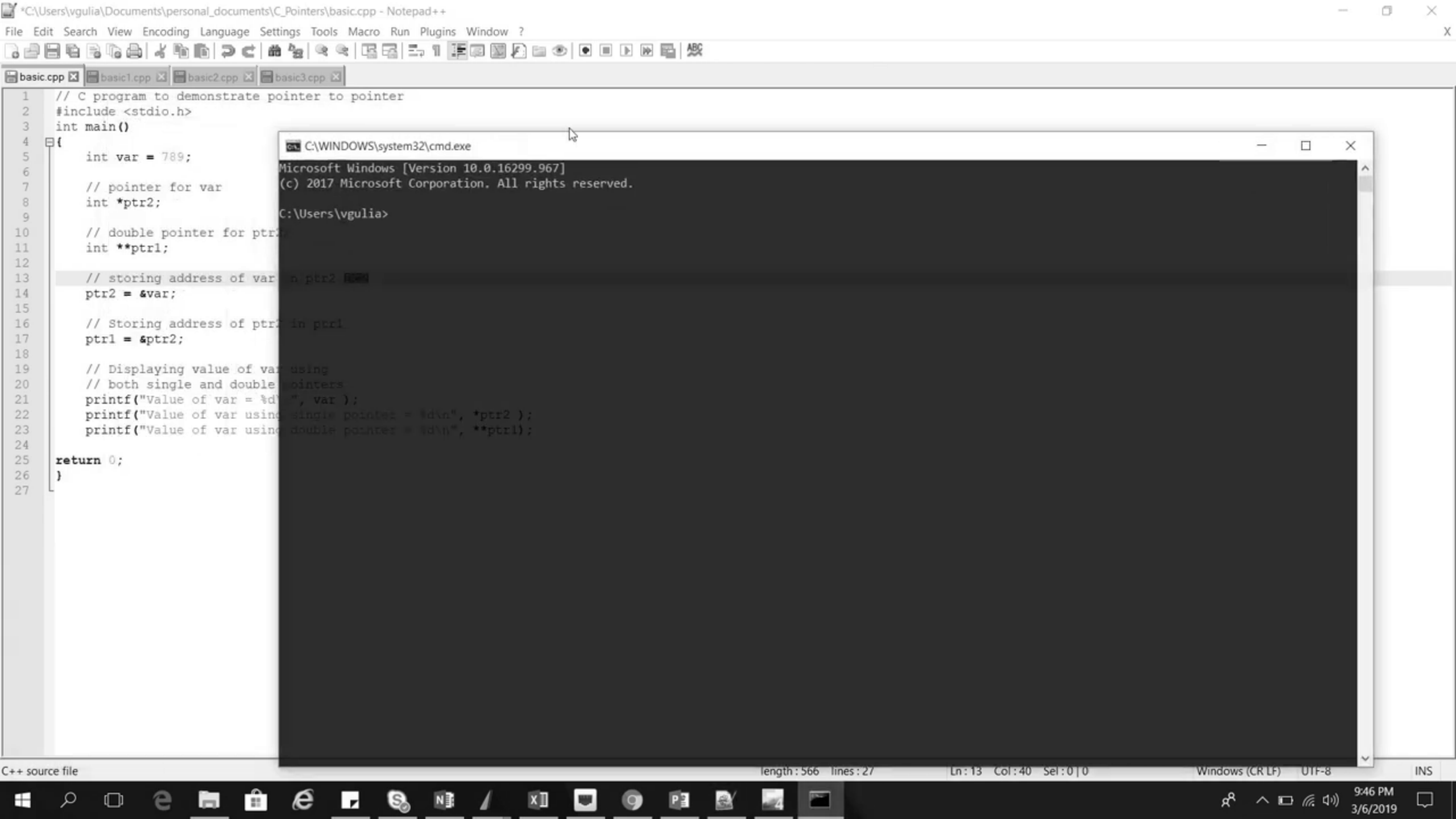
```
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 78;
6     // pointer for var
7     int *ptr2;
8     // double pointer for ptr2
9     int **ptr1;
10    // storing address of var in ptr2
11    ptr2 = &var;
12
13    // Storing address of ptr2 in ptr1
14    ptr1 = &ptr2;
15
16    // Displaying value of var using
17    // both single and double pointers
18    printf("Value of var = %d\n", var );
19    printf("Value of var using single pointer = %d\n", *ptr2 );
20    printf("Value of var using double pointer = %d\n", **ptr1);
21
22    return 0;
23 }
```

```
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
```

C:\WINDOWS\system32\cmd.exe

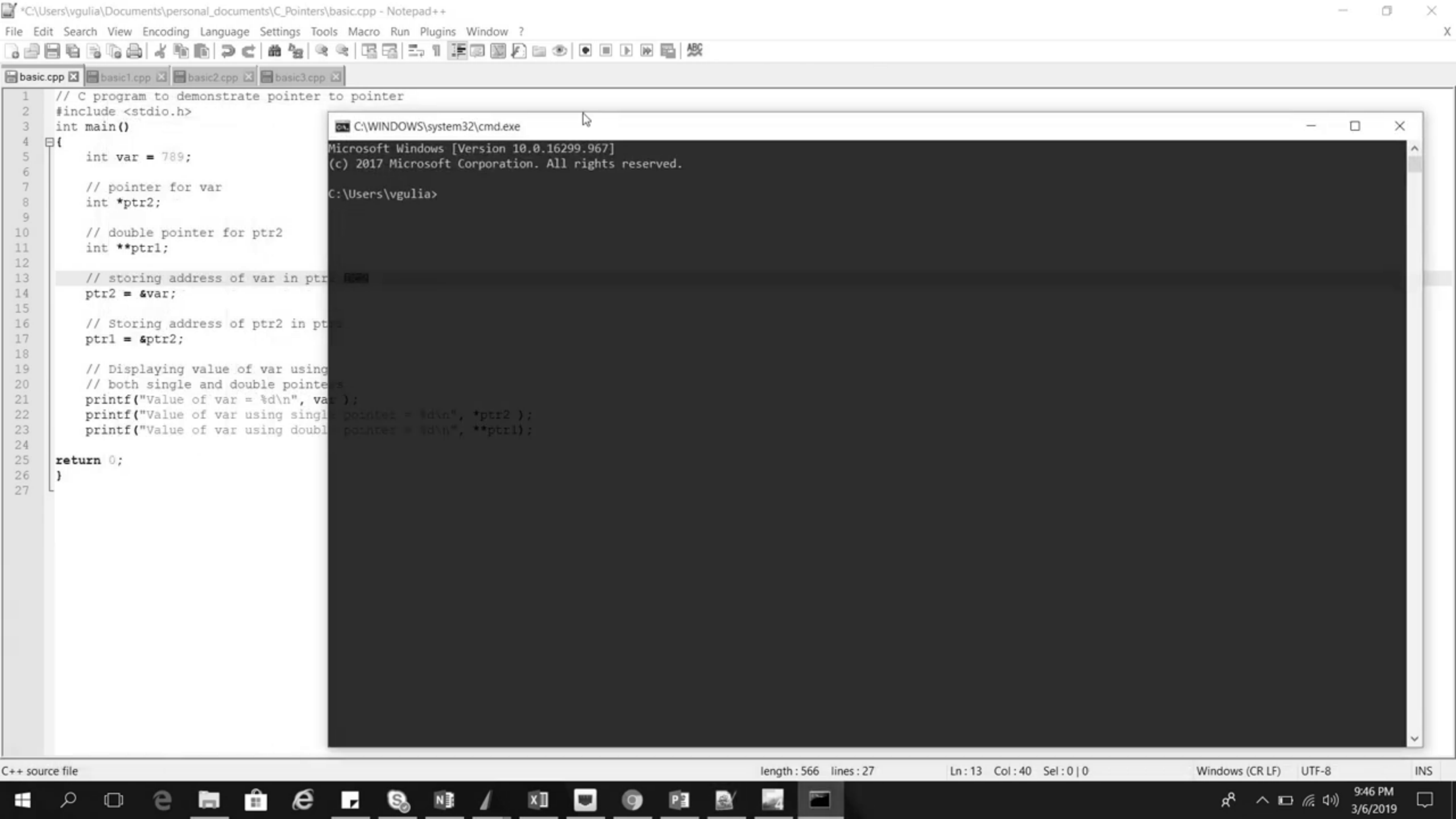
Microsoft Windows [Version 10.0.16299.967]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\vgulia>

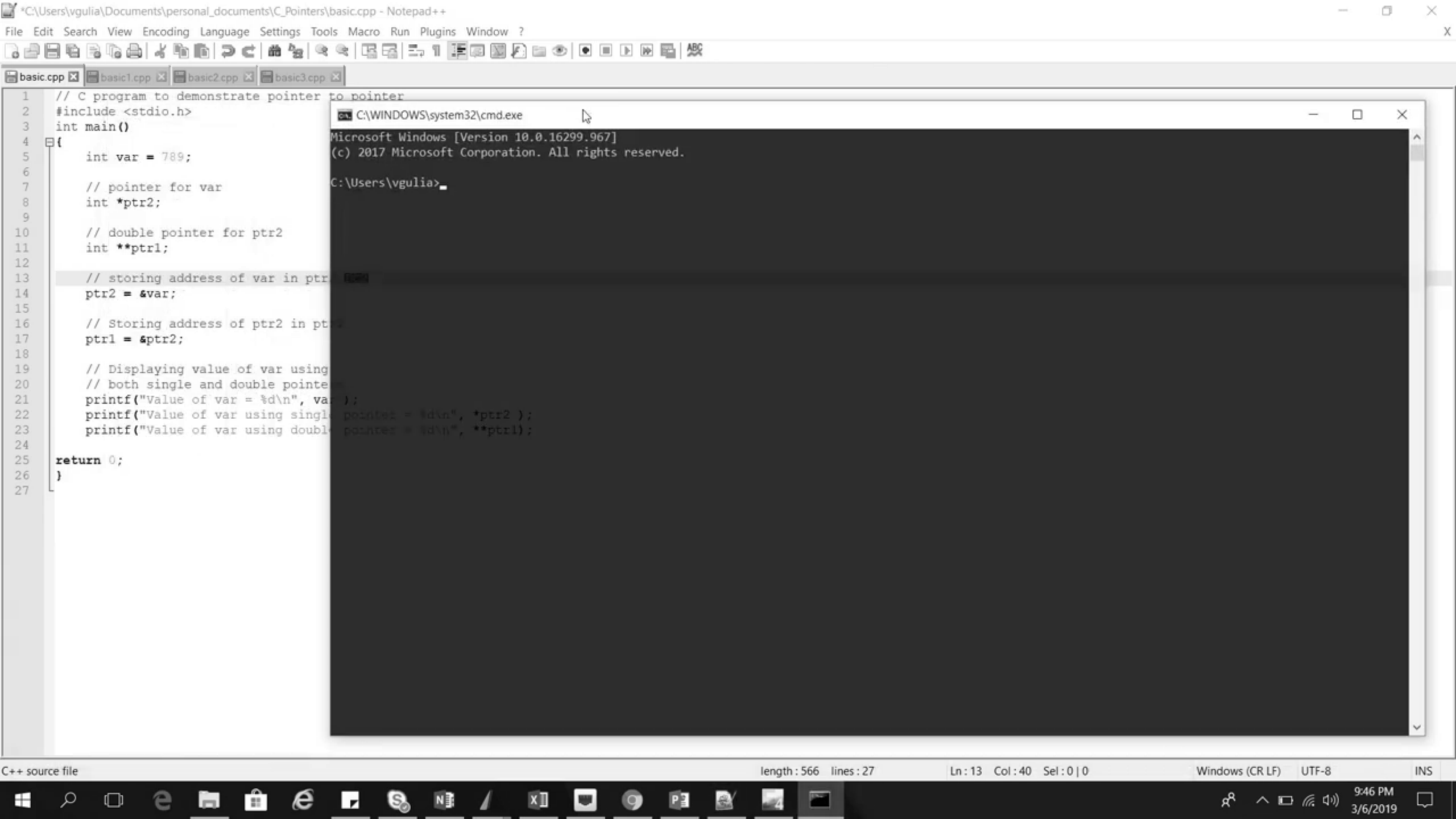


```
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
basic.cpp basic1.cpp basic2.cpp basic3.cpp
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.967]
(c) 2017 Microsoft Corporation. All rights reserved.
C:\Users\vgulia>

C++ source file
length: 566 lines: 27
Ln: 13 Col: 40 Sel: 0 | 0
Windows (CR LF) UTF-8
INS
9:46 PM
3/6/2019
```



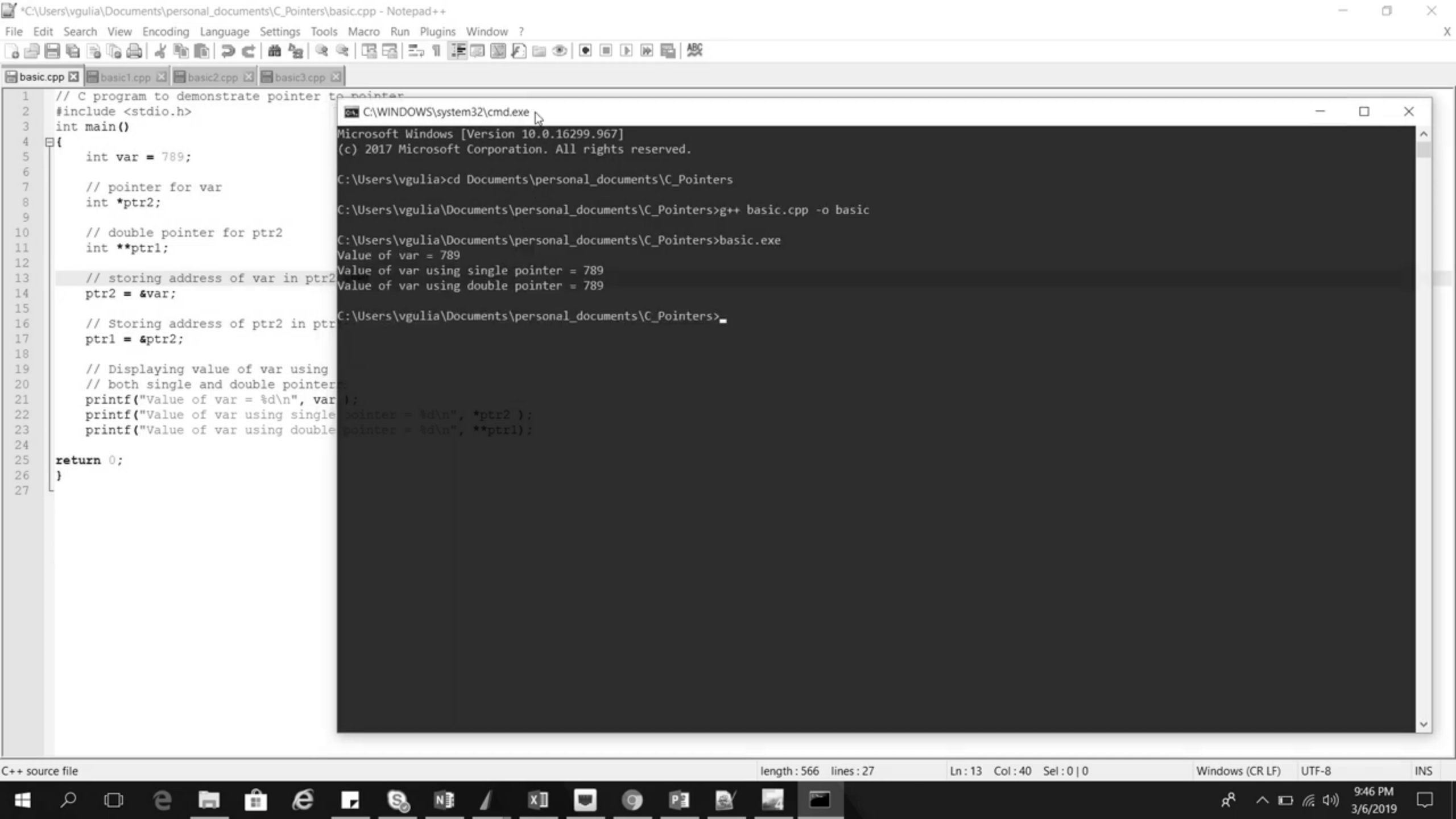
```
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
basic.cpp basic1.cpp basic2.cpp basic3.cpp
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.967]
(c) 2017 Microsoft Corporation. All rights reserved.
C:\Users\vgulia>
```

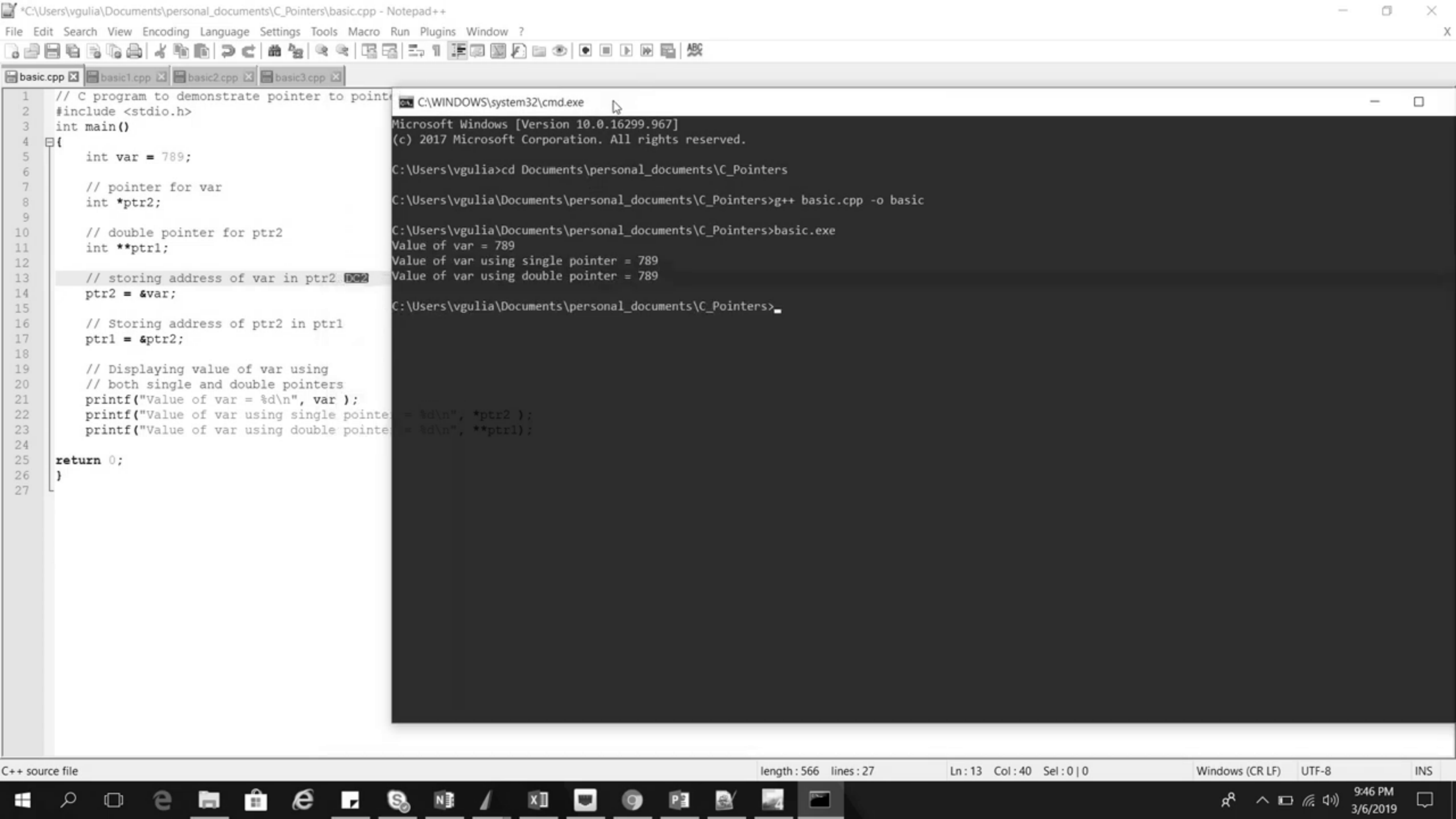


```
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
basic.cpp basic1.cpp basic2.cpp basic3.cpp
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var);
22    printf("Value of var using single pointer = %d\n", *ptr2);
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
```

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.967]
(c) 2017 Microsoft Corporation. All rights reserved.

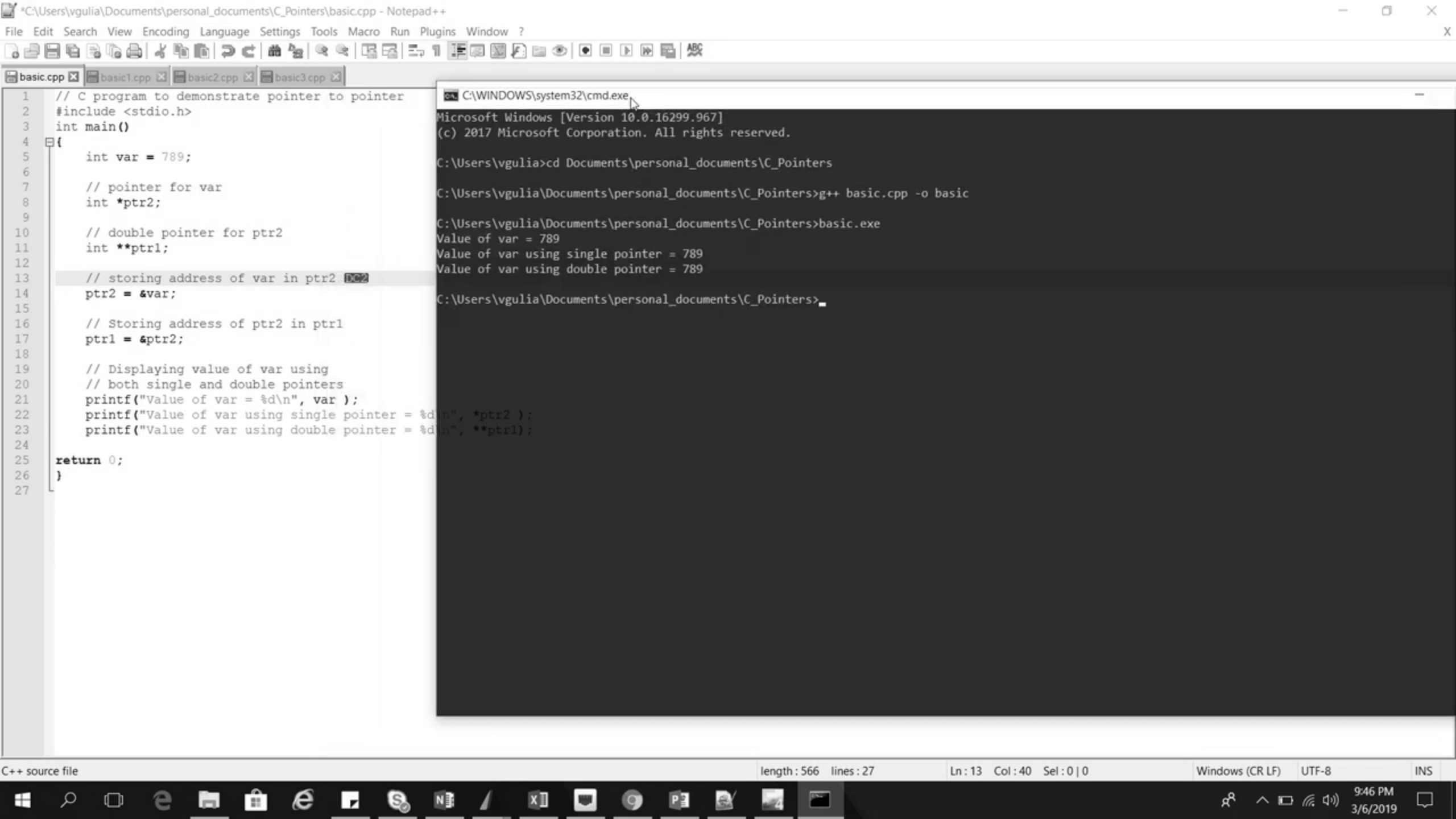
C:\Users\vgulia>
```





```
C:\Users\vgulia\Documents\personal_documents\C_Pointers\basic.cpp - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
basic.cpp basic1.cpp basic2.cpp basic3.cpp
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.967]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\vgulia>cd Documents\personal_documents\C_Pointers
C:\Users\vgulia\Documents\personal_documents\C_Pointers>g++ basic.cpp -o basic
C:\Users\vgulia\Documents\personal_documents\C_Pointers>basic.exe
Value of var = 789
Value of var using single pointer = 789
Value of var using double pointer = 789
C:\Users\vgulia\Documents\personal_documents\C_Pointers>
```



```
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
```

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.967]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\vgulia>cd Documents\personal_documents\C_Pointers

C:\Users\vgulia\Documents\personal_documents\C_Pointers>g++ basic.cpp -o basic

C:\Users\vgulia\Documents\personal_documents\C_Pointers>basic.exe
Value of var = 789
Value of var using single pointer = 789
Value of var using double pointer = 789

C:\Users\vgulia\Documents\personal_documents\C_Pointers>
```



basic.cpp basic1.cpp basic2.cpp basic3.cpp

```
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
```

C:\WINDOWS\system32\cmd.exe

Microsoft Windows [Version 10.0.16299.967]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\vgulia>cd Documents\personal_documents\C_Pointers

C:\Users\vgulia\Documents\personal_documents\C_Pointers>g++ basic.cpp -o basic

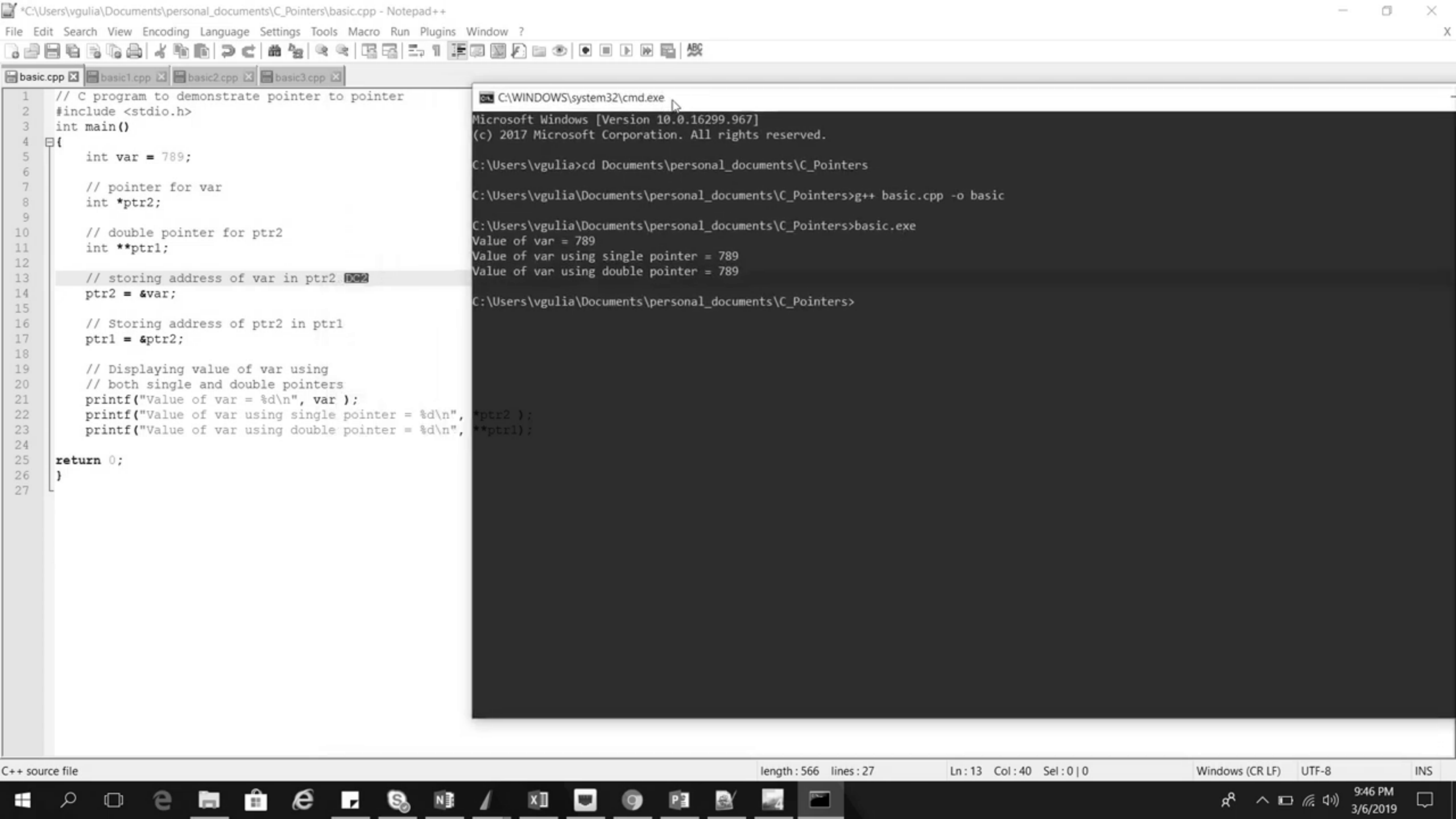
C:\Users\vgulia\Documents\personal_documents\C_Pointers>basic.exe

Value of var = 789

Value of var using single pointer = 789

Value of var using double pointer = 789

C:\Users\vgulia\Documents\personal_documents\C_Pointers>_





basic.cpp basic1.cpp basic2.cpp basic3.cpp

```
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
```

C:\WINDOWS\system32\cmd.exe

Microsoft Windows [Version 10.0.16299.967]

(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\vgulia>cd Documents\personal_documents\C_Pointers

C:\Users\vgulia\Documents\personal_documents\C_Pointers>g++ basic.cpp -o basic

C:\Users\vgulia\Documents\personal_documents\C_Pointers>basic.exe

Value of var = 789

Value of var using single pointer = 789

Value of var using double pointer = 789

C:\Users\vgulia\Documents\personal_documents\C_Pointers>



basic.cpp basic1.cpp basic2.cpp basic3.cpp

```
1 // C program to demonstrate pointer to pointer
2 #include <stdio.h>
3 int main()
4 {
5     int var = 789;
6
7     // pointer for var
8     int *ptr2;
9
10    // double pointer for ptr2
11    int **ptr1;
12
13    // storing address of var in ptr2
14    ptr2 = &var;
15
16    // Storing address of ptr2 in ptr1
17    ptr1 = &ptr2;
18
19    // Displaying value of var using
20    // both single and double pointers
21    printf("Value of var = %d\n", var );
22    printf("Value of var using single pointer = %d\n", *ptr2 );
23    printf("Value of var using double pointer = %d\n", **ptr1);
24
25    return 0;
26 }
27
```

C:\WINDOWS\system32\cmd.exe

Microsoft Windows [Version 10.0.16299.967]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\vgulia>cd Documents\personal_documents\C_Pointers

C:\Users\vgulia\Documents\personal_documents\C_Pointers>g++ basic.cpp -o basic

C:\Users\vgulia\Documents\personal_documents\C_Pointers>basic.exe

Value of var = 789

Value of var using single pointer = 789

Value of var using double pointer = 789

C:\Users\vgulia\Documents\personal_documents\C_Pointers>

FileHomeInsertDesignTransitionsAnimationsSlide ShowReviewViewHelpStoryboardingTell me what you want to do

PasteCutCopyFormat PainterClipboard

New SlideLayoutResetSectionSlides

Font

Paragraph

Drawing

Editing

Voice

- 1

Double Pointer in C
- 2

Representation of Double pointer ...
- 3

Example
- 4

Thank you for watching!

Example ...

```
// C program to demonstrate pointer to pointer
int main()
{
    int var = 789;

    // pointer for var
    int *ptr2;

    // double pointer for ptr2
    int **ptr1;

    // storing address of var in ptr2
    ptr2 = &var;

    // Storing address of ptr2 in ptr1
    ptr1 = &ptr2;

    // Displaying value of var using
    // both single and double pointers
    printf("Value of var = %d\n", var );
    printf("Value of var using single pointer = %d\n", *ptr2 );
    printf("Value of var using double pointer = %d\n", **ptr1);

    return 0;
}
```

Var=789	Ptr2 = 1000	Ptr1=2000
1000	2000	3000

Output:
Var = 789
*ptr2 = 789
**ptr1 = 789

Click to add notes

FileHomeInsertDesignTransitionsAnimationsSlide ShowReviewViewHelpStoryboardingTell me what you want to doShareComments

Paste

CutCopyFormat Painter

Clipboard

LayoutResetSection

New Slide

Slides

18A²A₂

BBIUSAV_{AV}Aa

Font

Text DirectionAlign TextConvert to SmartArt

Paragraph

ArrangeQuick Styles

Drawing

FindReplaceSelect

Editing

Dictate

Voice

- 1

Double Pointer in C
- 2

Representation of Double pointer ...
- 3

Example
- 4

Thank you for watching!



Thank you for watching!

Please leave us your comments.

Click to add notes