NAME: OYEBOADE Rukayah Kiitan

MATRIC NO: 17/ENG08/004

DEPARTMENT: Biomedical Engineering

COURSE CODE: BME316

COURSE TITLE: Computer Application to BME

ASSIGNMENT

**Exercise 2.1**

*Code*

%CRT qualification test

commandwindow

clc

syms nyha sixmd ef

nyha=[3 4 2 3]

sixmd = [250 170 210 200]

ef= [30 25 40 33]

patient=[1 2 3 4]

table = [patient' nyha' sixmd' ef']

a=CRTqualification(3, 250, 30);

b = CRTqualification(4, 170, 25);

c= CRTqualification(2, 210, 40);

d = CRTqualification(3, 200, 33);

function [a]=CRTqualification(nyha, sixmwd, ef)

if (nyha >=3 & nyha <= 4) & (sixmwd<225) & (ef < 35)

a = "yes"

else

a = "no"

end

end

*Result*

nyha =

3 4 2 3

sixmd =

250 170 210 200

ef =

30 25 40 33

patient =

1 2 3 4

table =

1 3 250 30

2 4 170 25

3 2 210 40

4 3 200 33

a =

"no"

a =

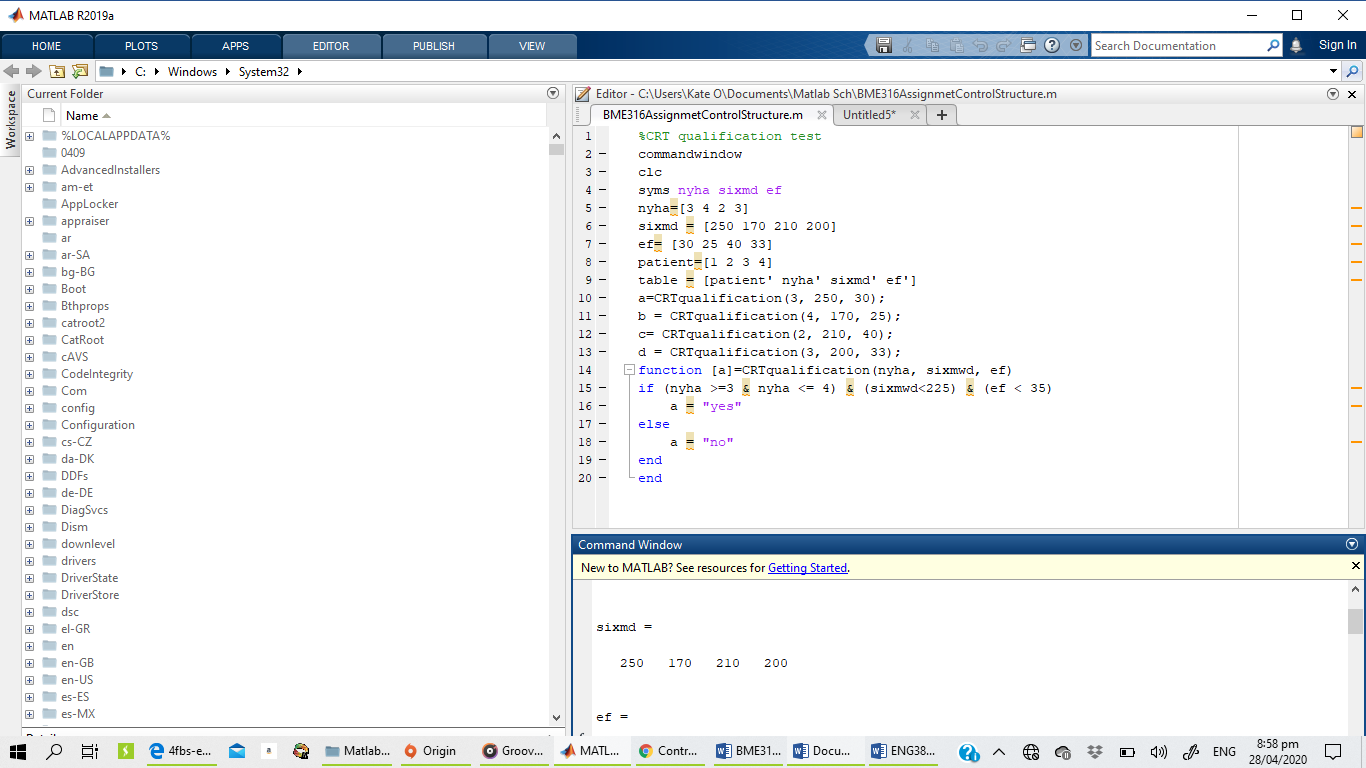
"yes"

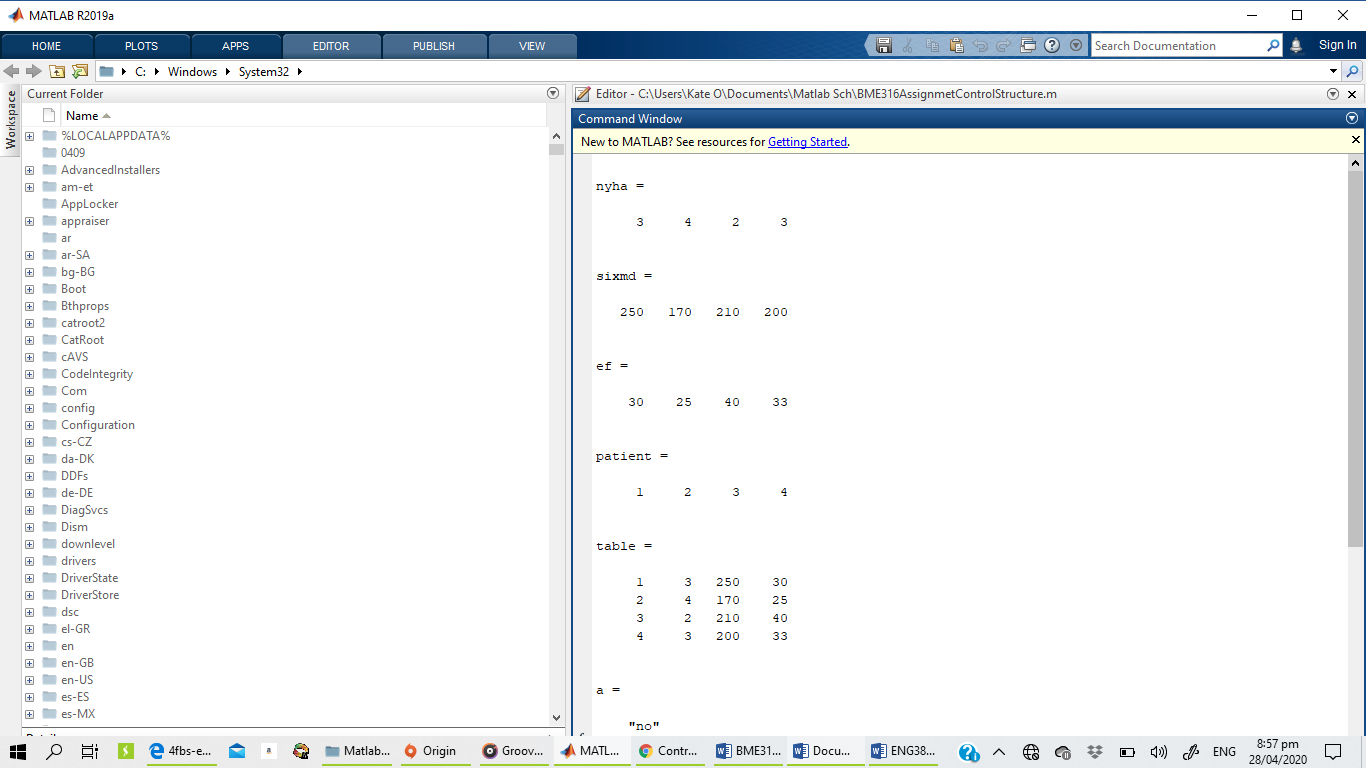
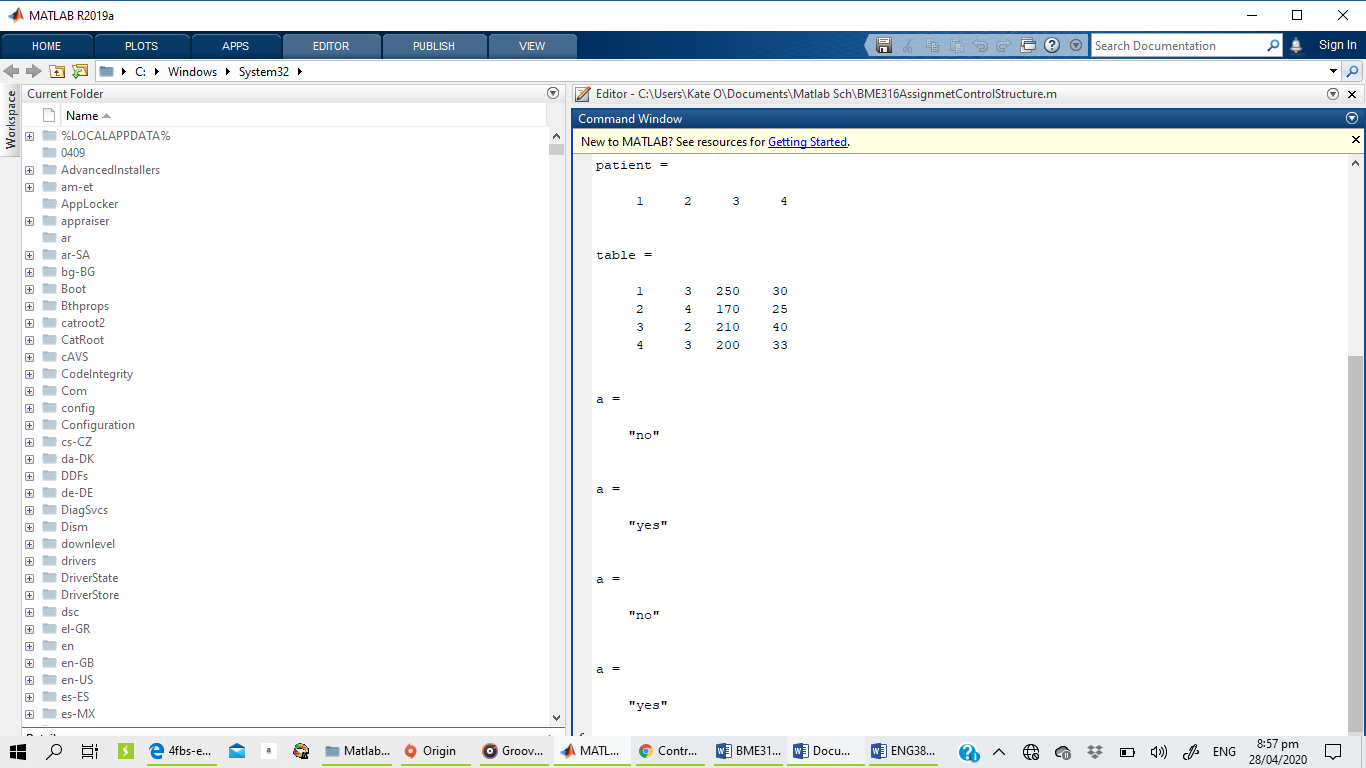
a =

"no"

a =

"yes"





**EXERCISE 2.2**

*Codes*

%CRT qualification test

commandwindow

clc

syms nyha\_pre sixmwd\_pre ef\_pre nyha\_post sixmwd\_post ef\_post

nyha\_post=[3 2]

sixmwd\_post = [220 230]

ef\_post= [30 45]

patient=[2 4]

table = [patient' nyha\_post' sixmwd\_post' ef\_post']

a = CRTqualification(4, 170, 25, 3, 220, 30);

b = CRTqualification(3, 200, 33, 2, 230, 45);

function [a]=CRTqualification(nyha\_pre, sixmwd\_pre, ef\_pre, nyha\_post, sixmwd\_post, ef\_post)

if (nyha\_pre >=3 & nyha\_pre <= 4)& (sixmwd\_pre<225) & (ef\_pre<35)

a ="Yes"

else

a = "no"

end

if (nyha\_post >=2 & nyha\_post <= 3) & (sixmwd\_post<247.5) & (ef\_post < 38.5)

a = "yes"

else

a="no"

end

end

*Result*

nyha\_post =

3 2

sixmwd\_post =

220 230

ef\_post =

30 45

patient =

2 4

table =

2 3 220 30

4 2 230 45

a =

"Yes" (pre)

a =

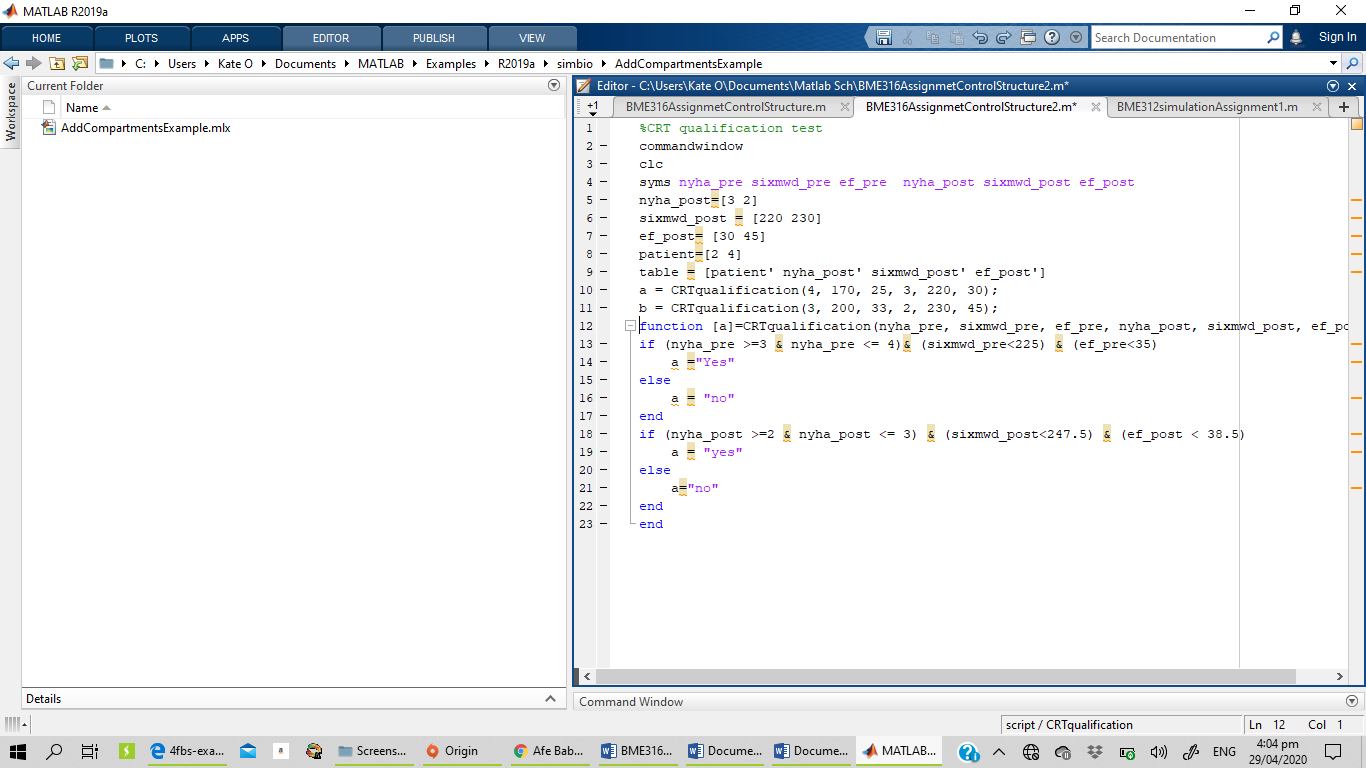
"yes" (post)

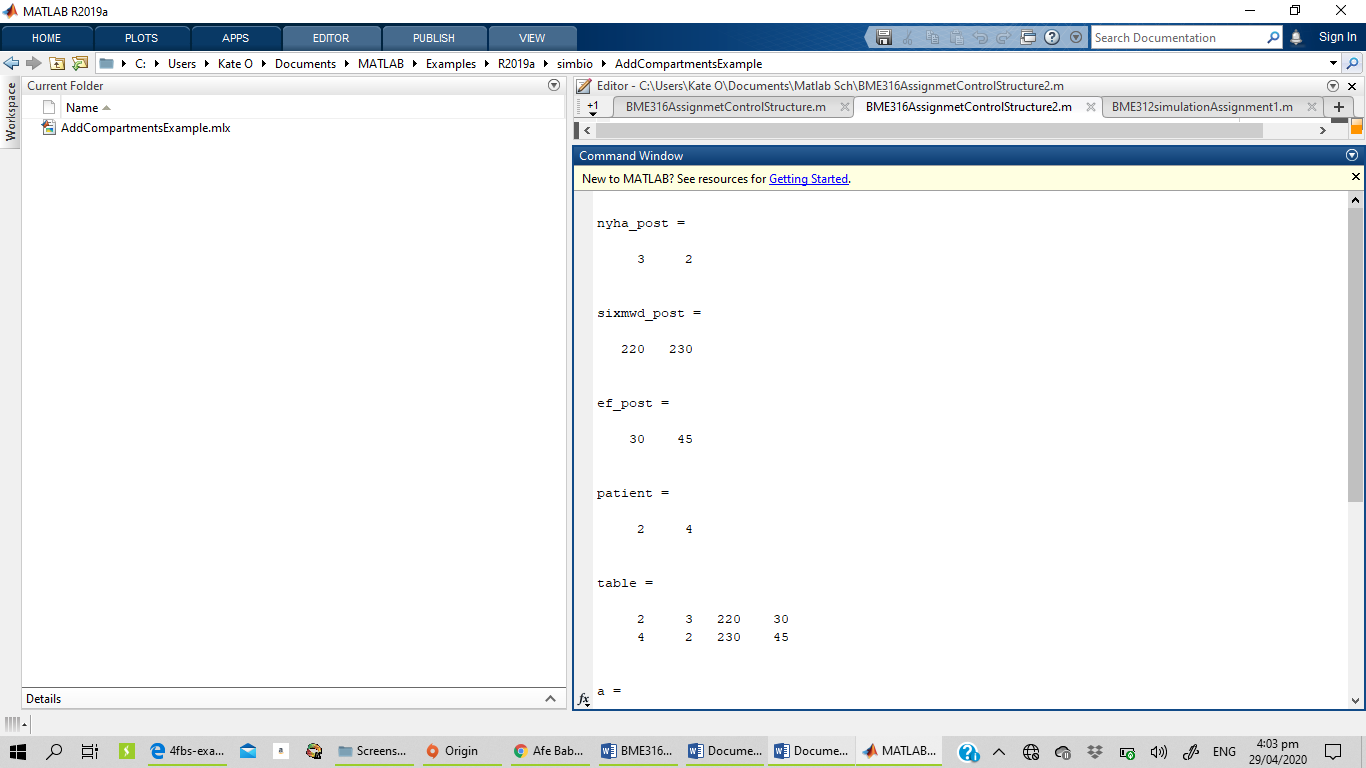
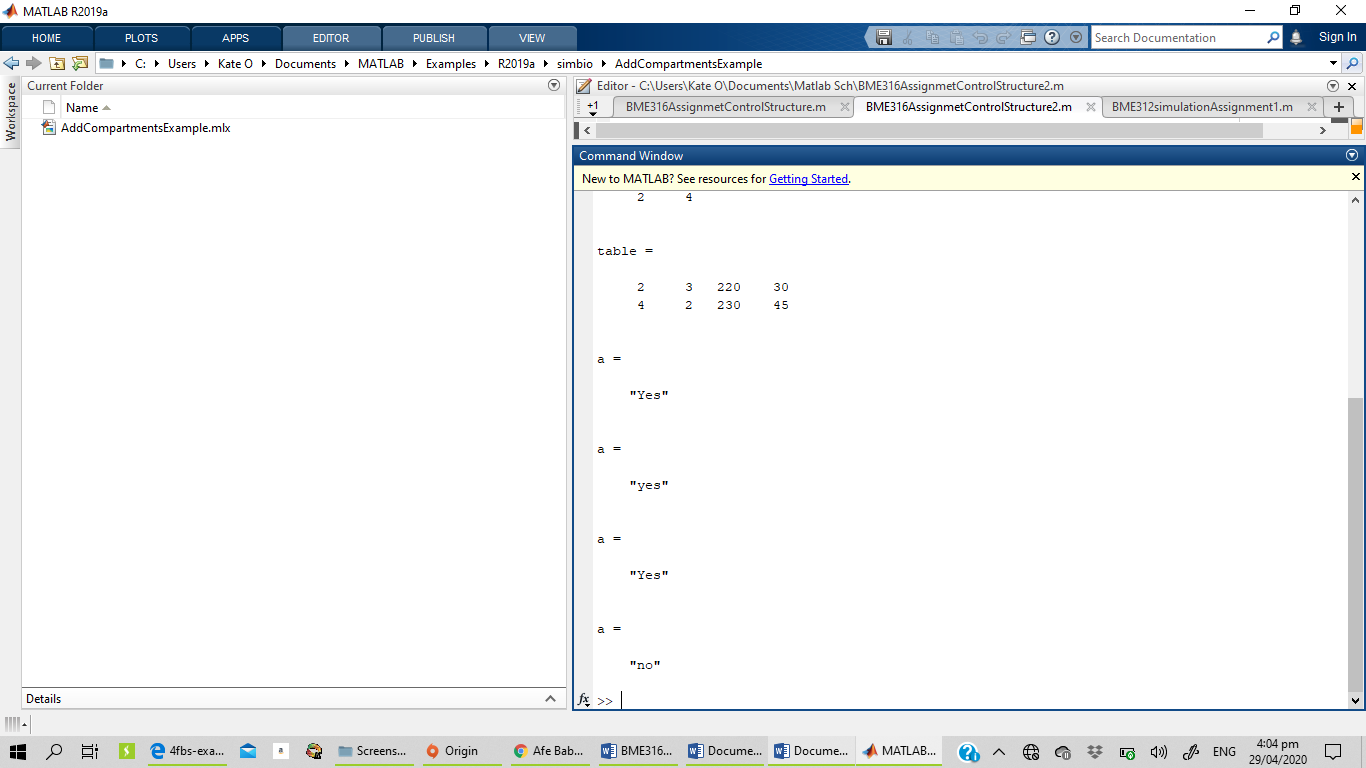
a =

"Yes" (pre)

a =

"no" (post)





**Exercise 2.3**

*Codes*

commandwindow

clear clc

c = 2

a = 5

b = 3

a + b \* c

a^ b + c

2 \* a ==2 && c - 1 == b

b + 1 : 6

*Result*

c =

2

a =

5

b =

3

ans =

11

ans =

127

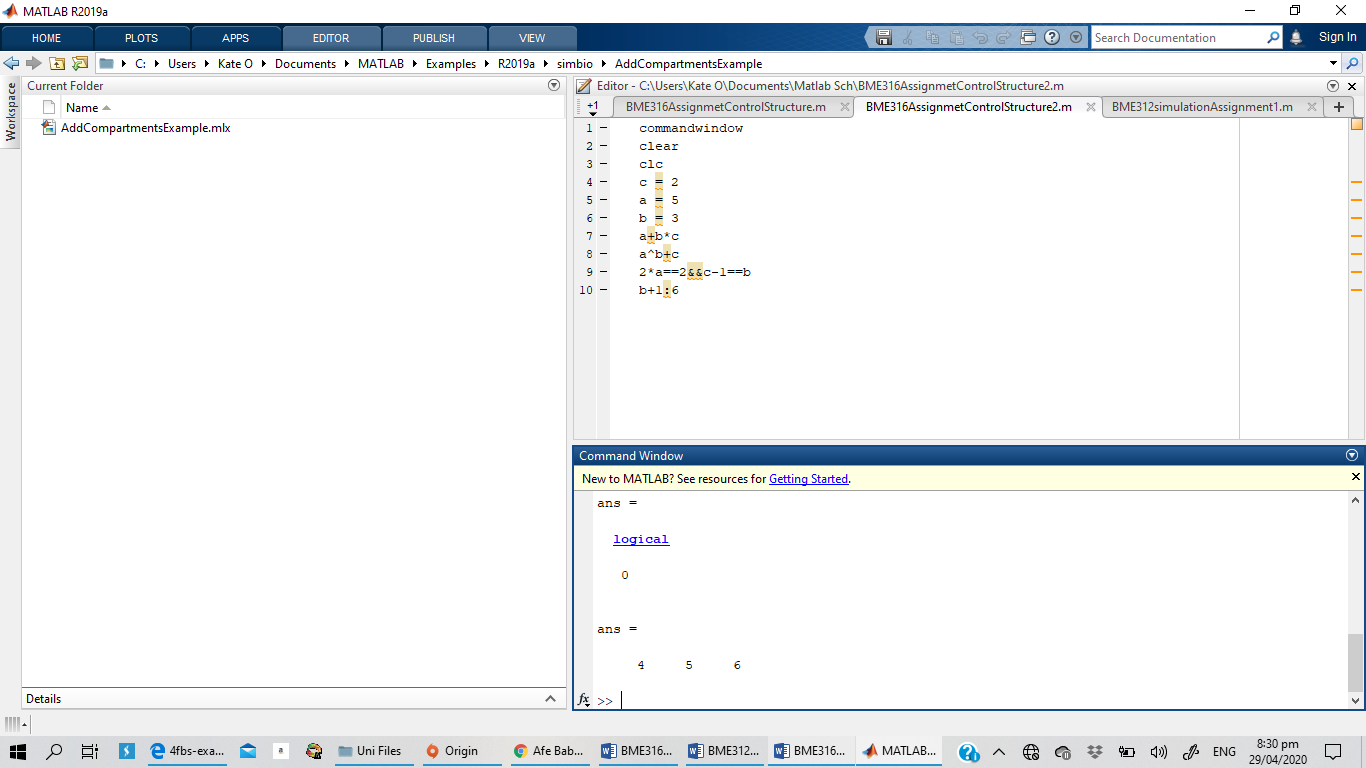
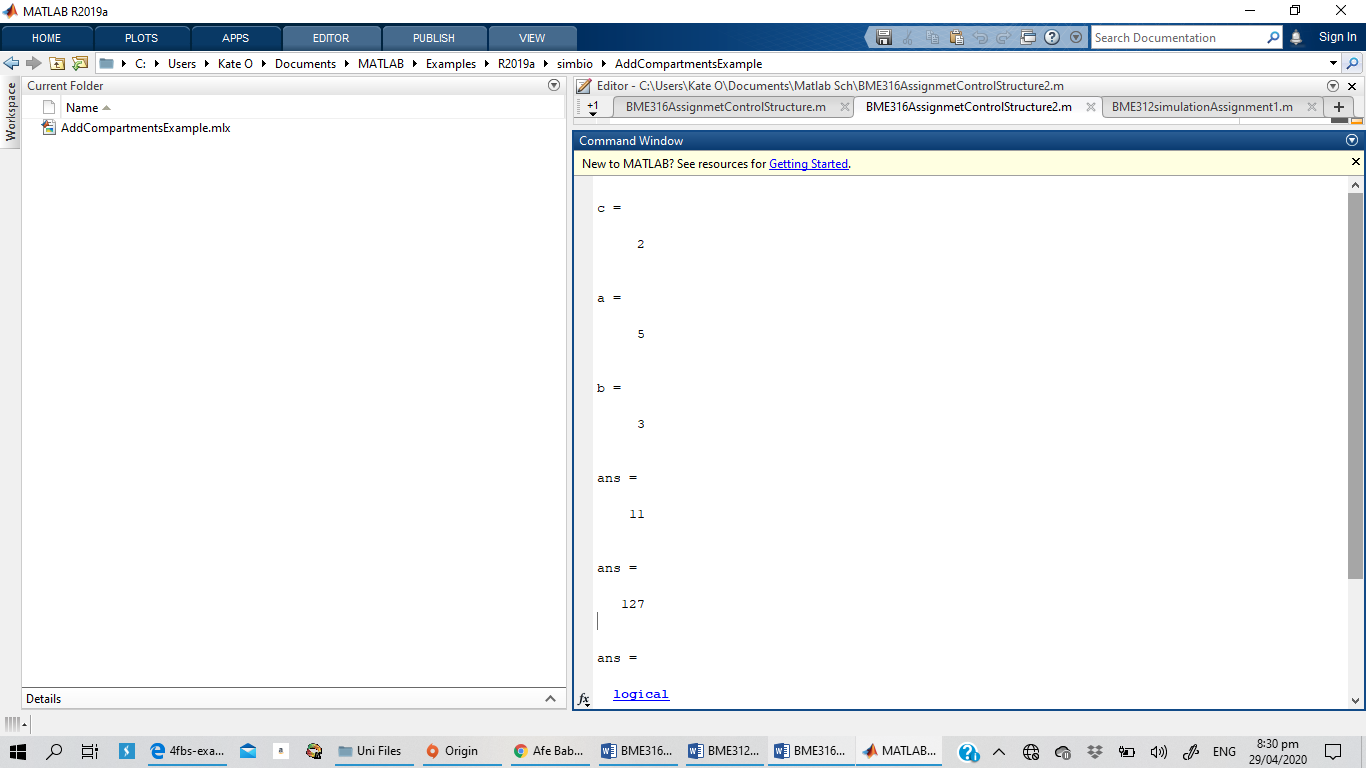
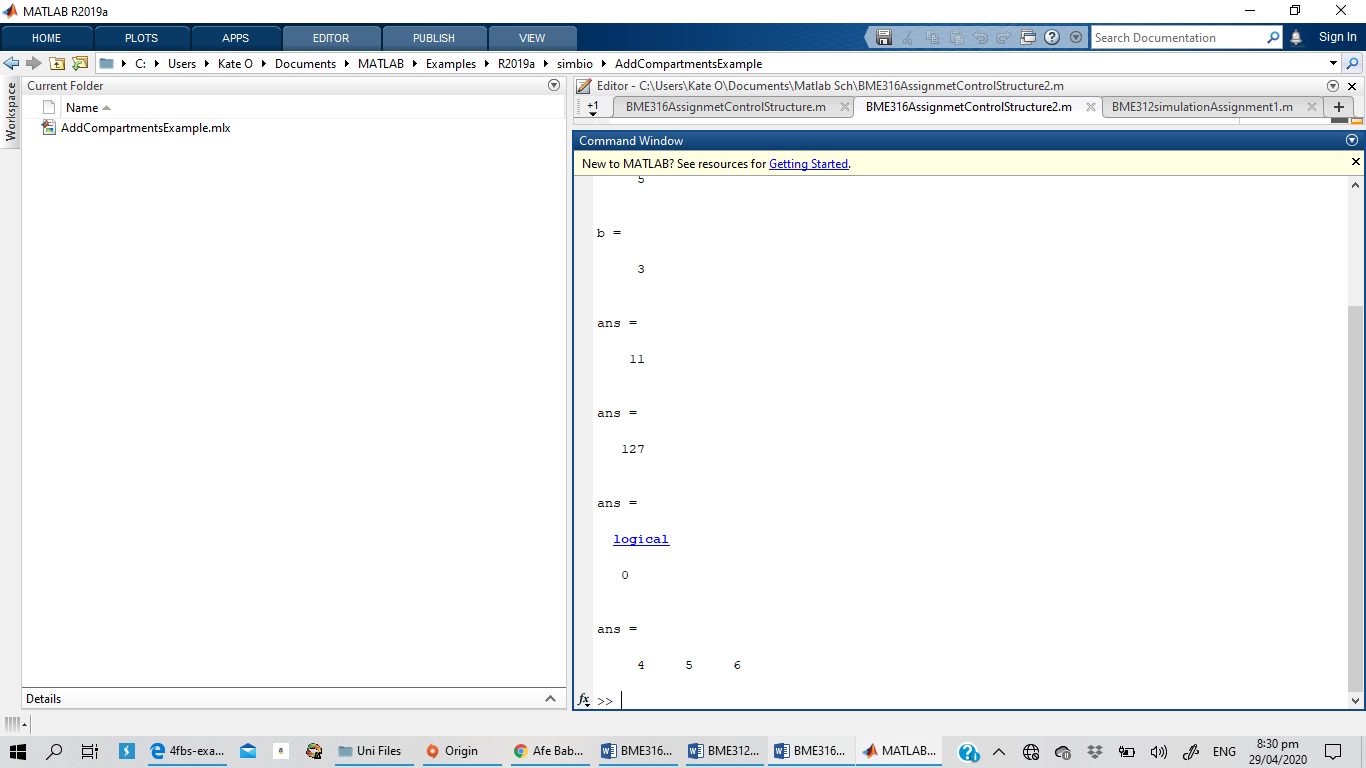
ans =

logical

0

ans =

4 5 6



**Exercise 2.7**

*Codes*

commandwindow

clear

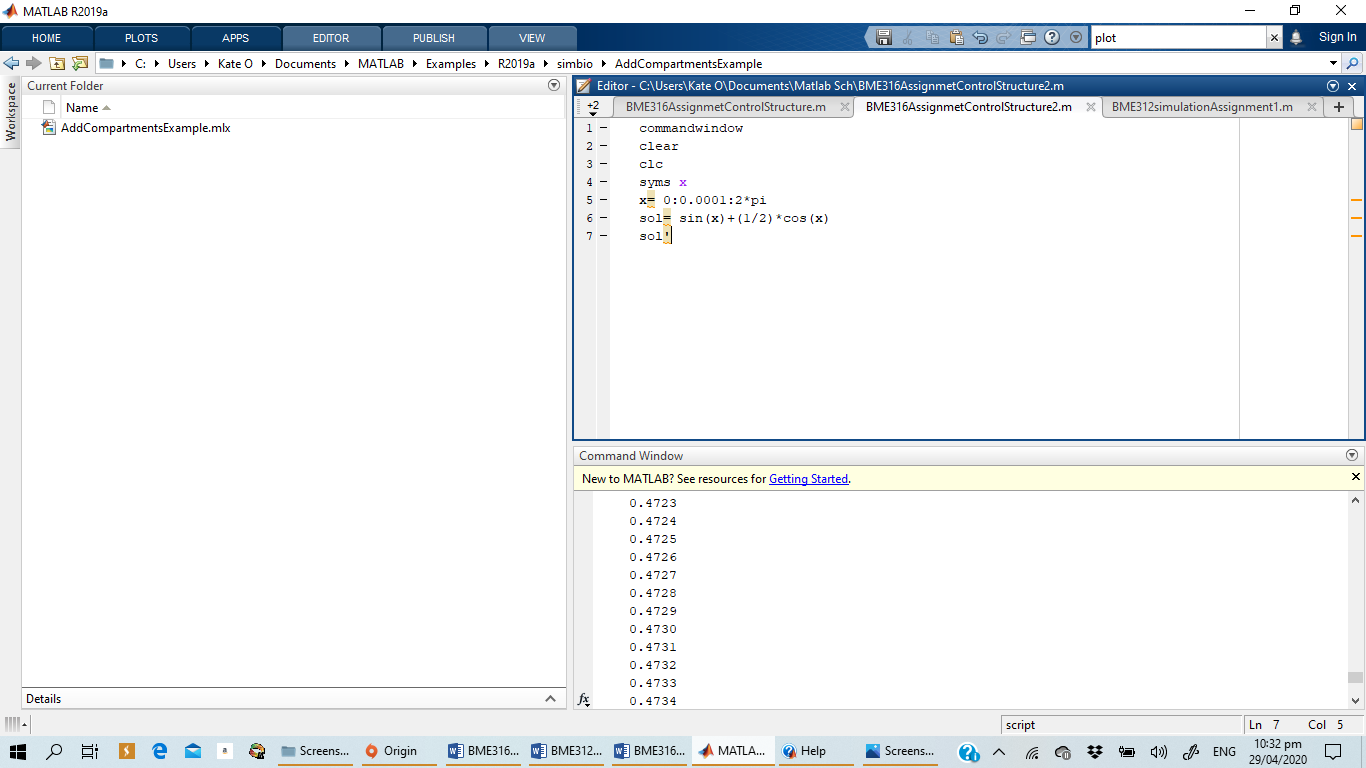
clc

syms x

x= 0:0.0001:2\*pi

sol= sin(x)+(1/2)\*cos(x)

sol'

****