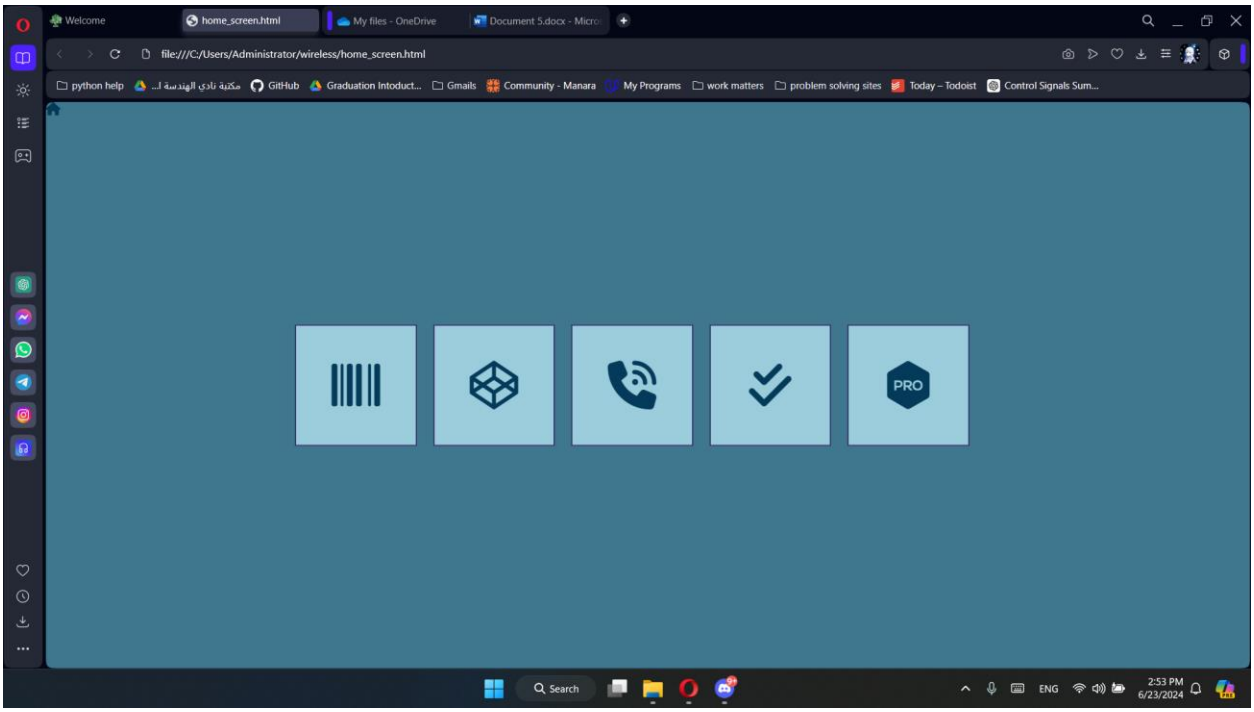
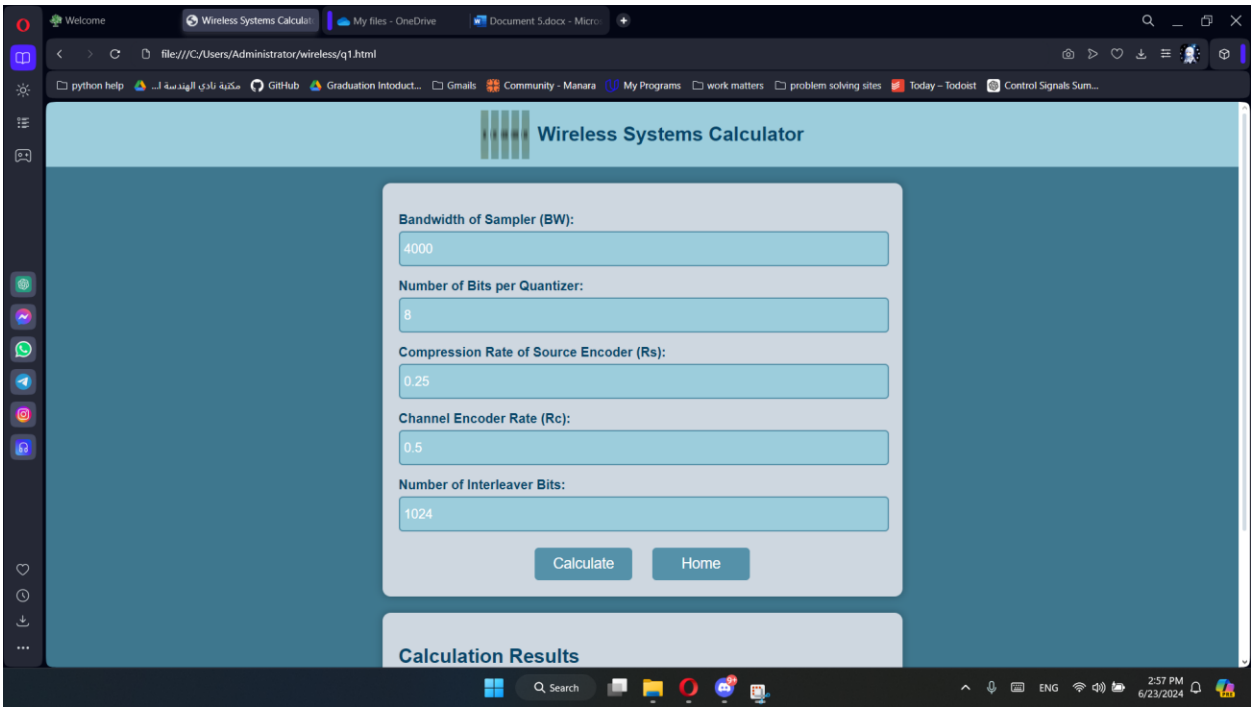
Done by: Amal AbuHmoud 1192141

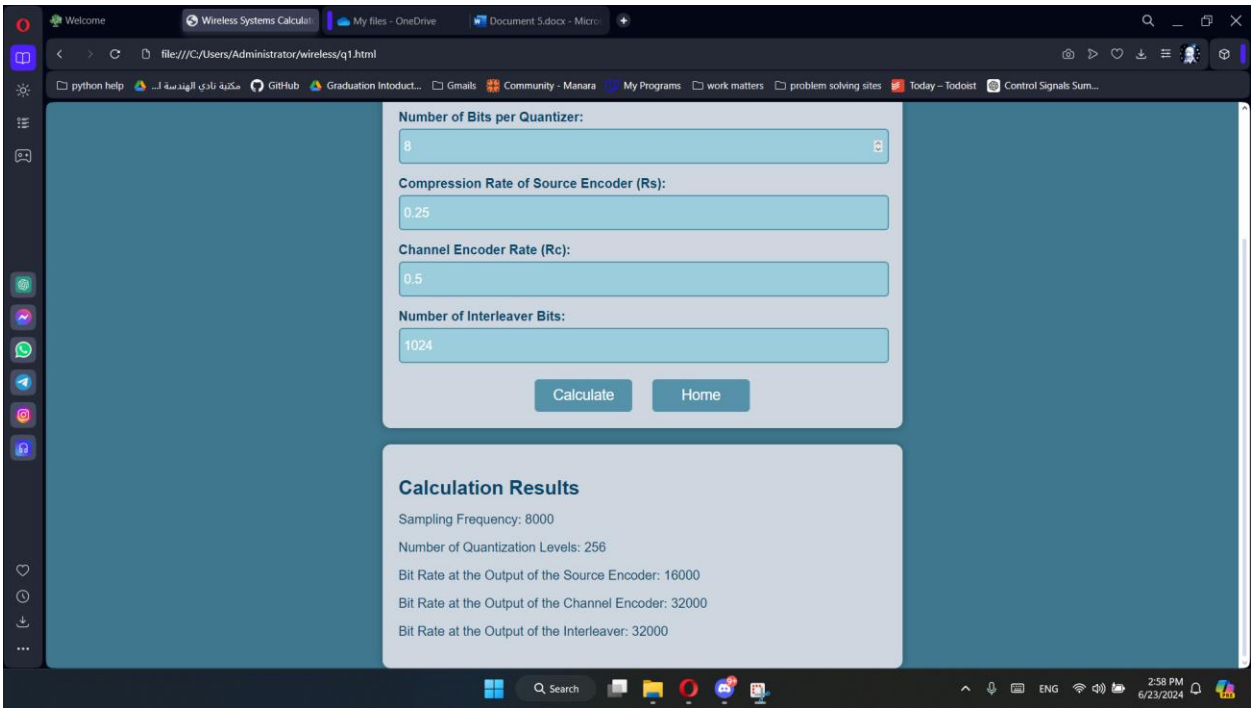
Meral 1200527

Main UI

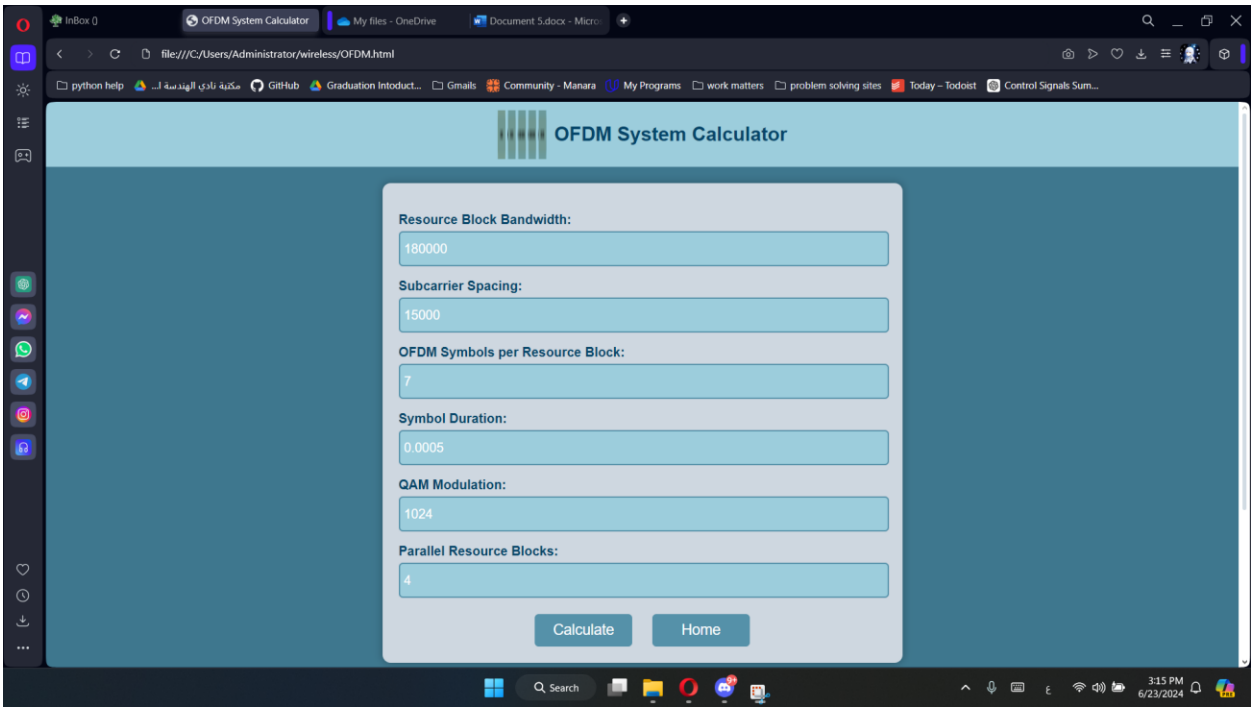


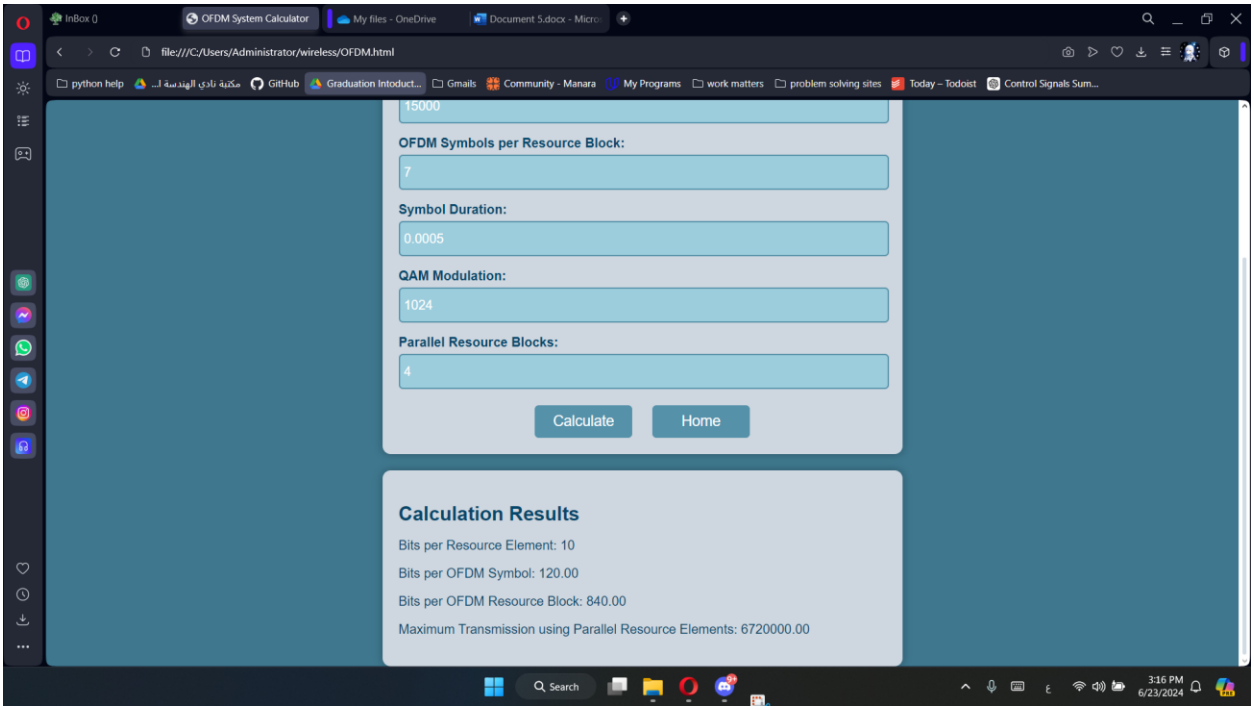
1- Wireless system calculator



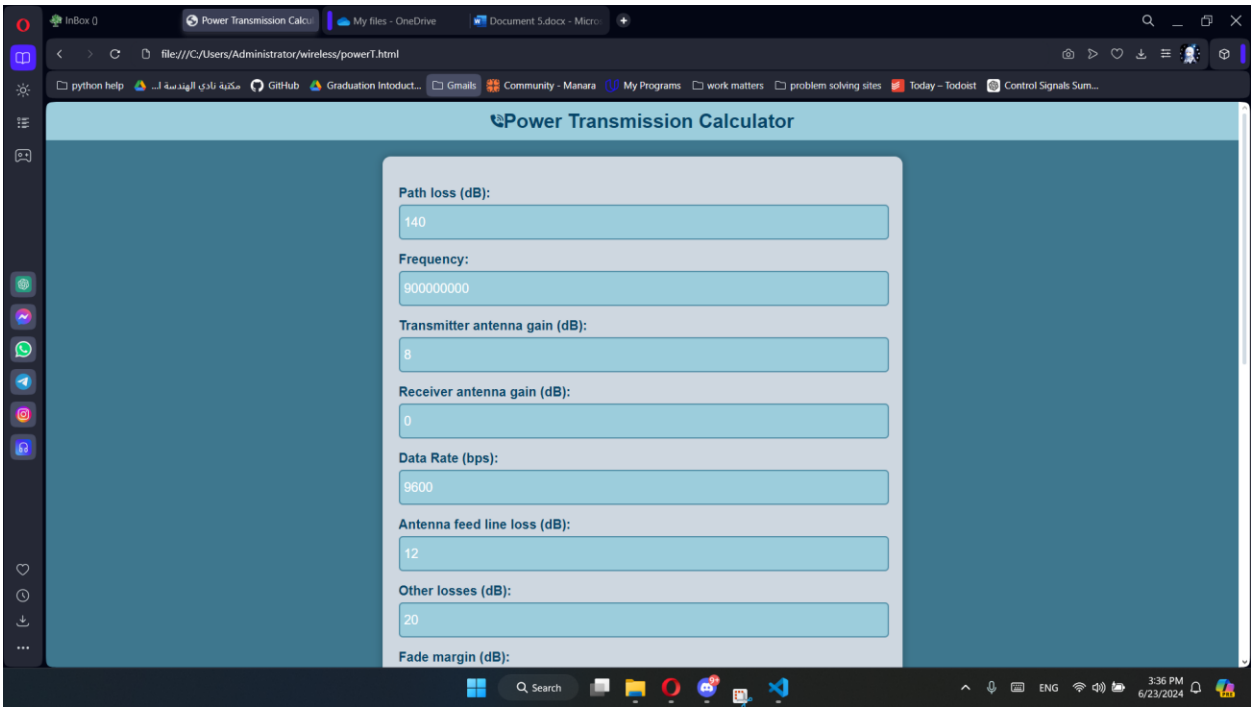


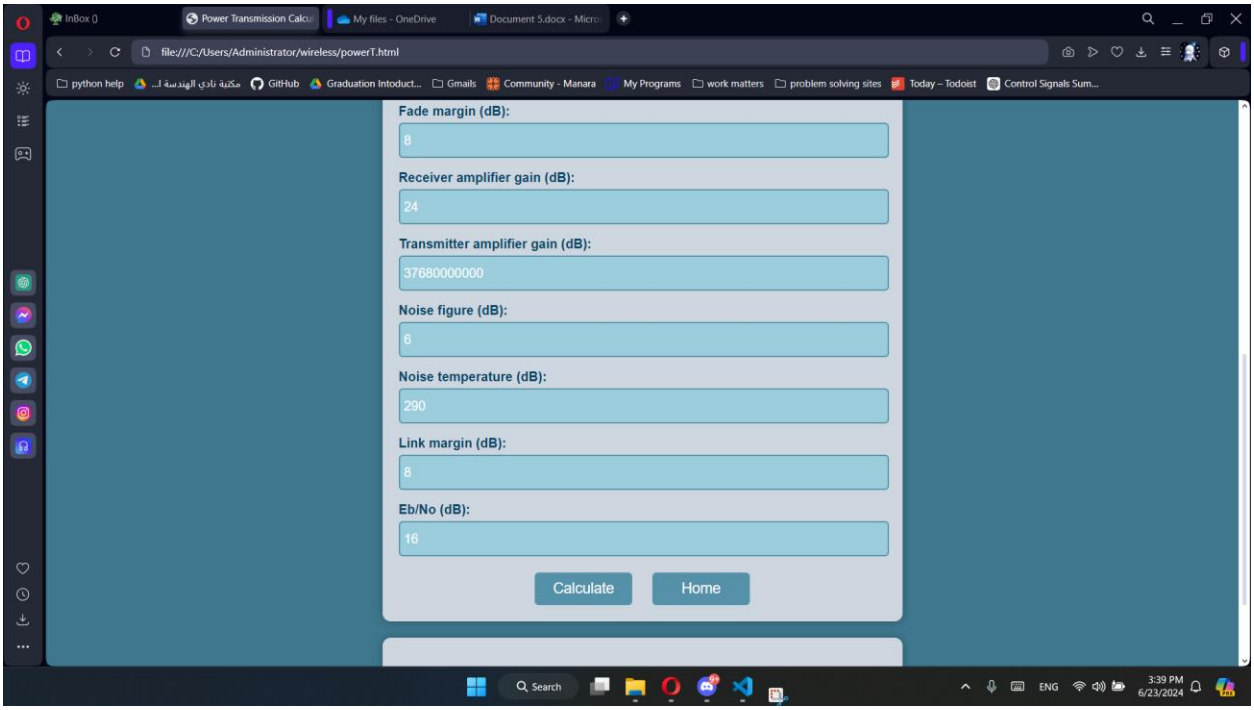
2- OFDM calculator

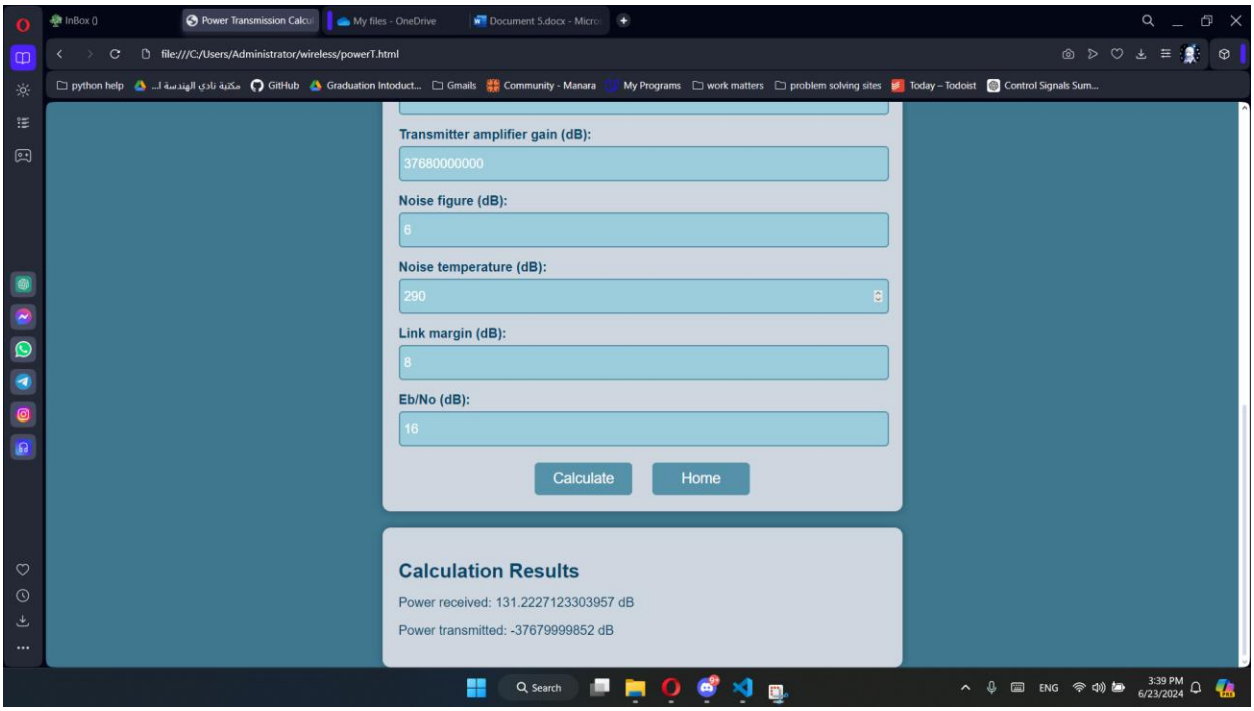




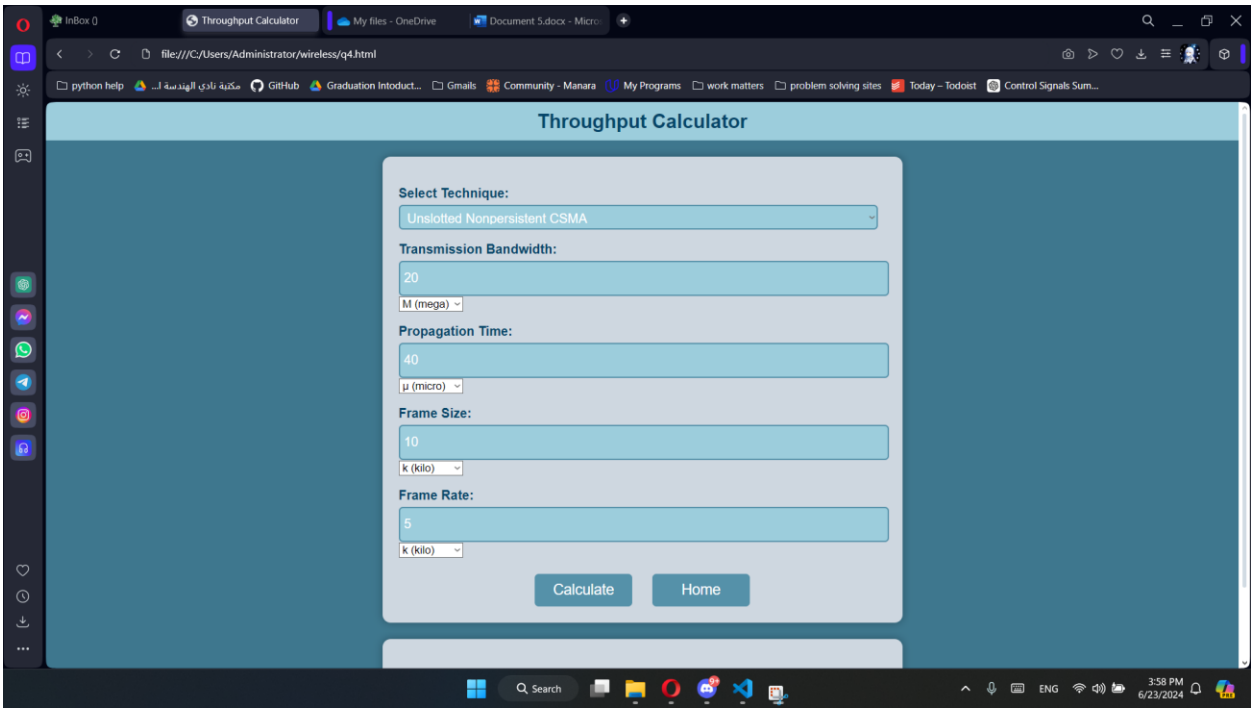
3- power transmission calculator

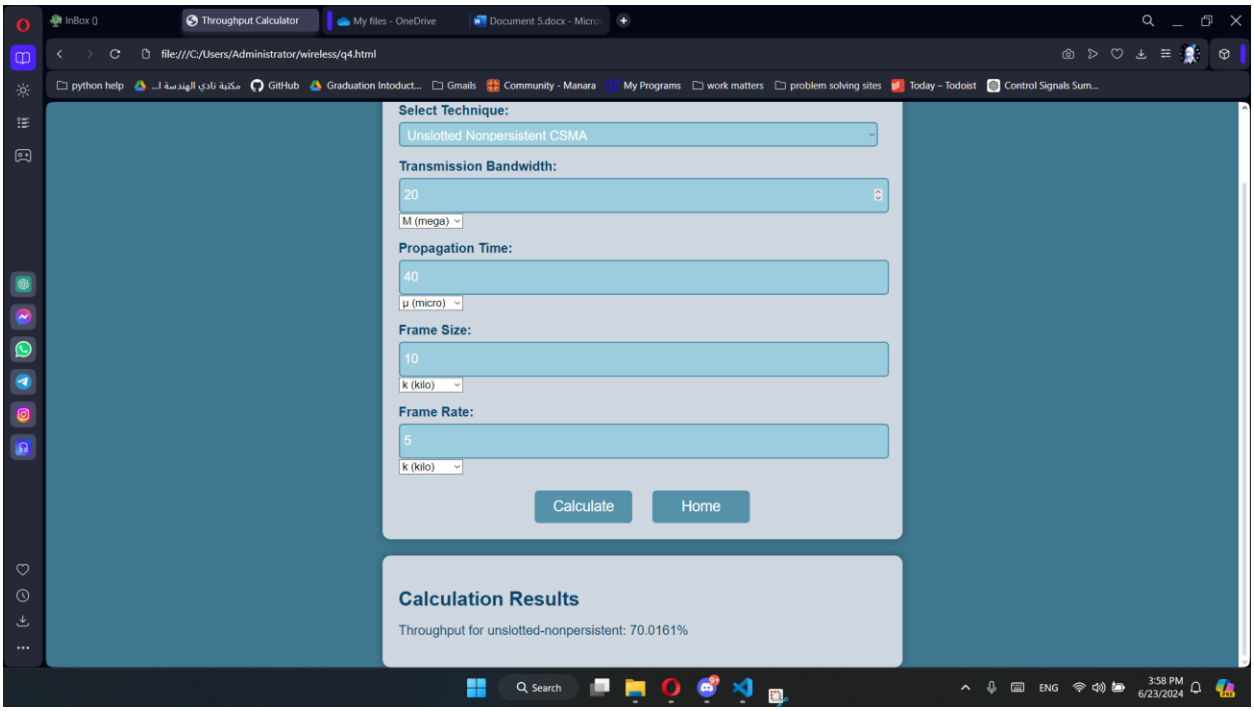

Power Transmission Calculator
Path loss (dB):
140
Frequency:
900000000
Transmitter antenna gain (dB):
8
Receiver antenna gain (dB):
0
Data Rate (bps):
9600
Antenna feed line loss (dB):
12
Other losses (dB):
20
Fade margin (dB):


Fade margin (dB):
8
Receiver amplifier gain (dB):
24
Transmitter amplifier gain (dB):
37680000000
Noise figure (dB):
6
Noise temperature (dB):
290
Link margin (dB):
8
Eb/No (dB):
16
Calculate
Home

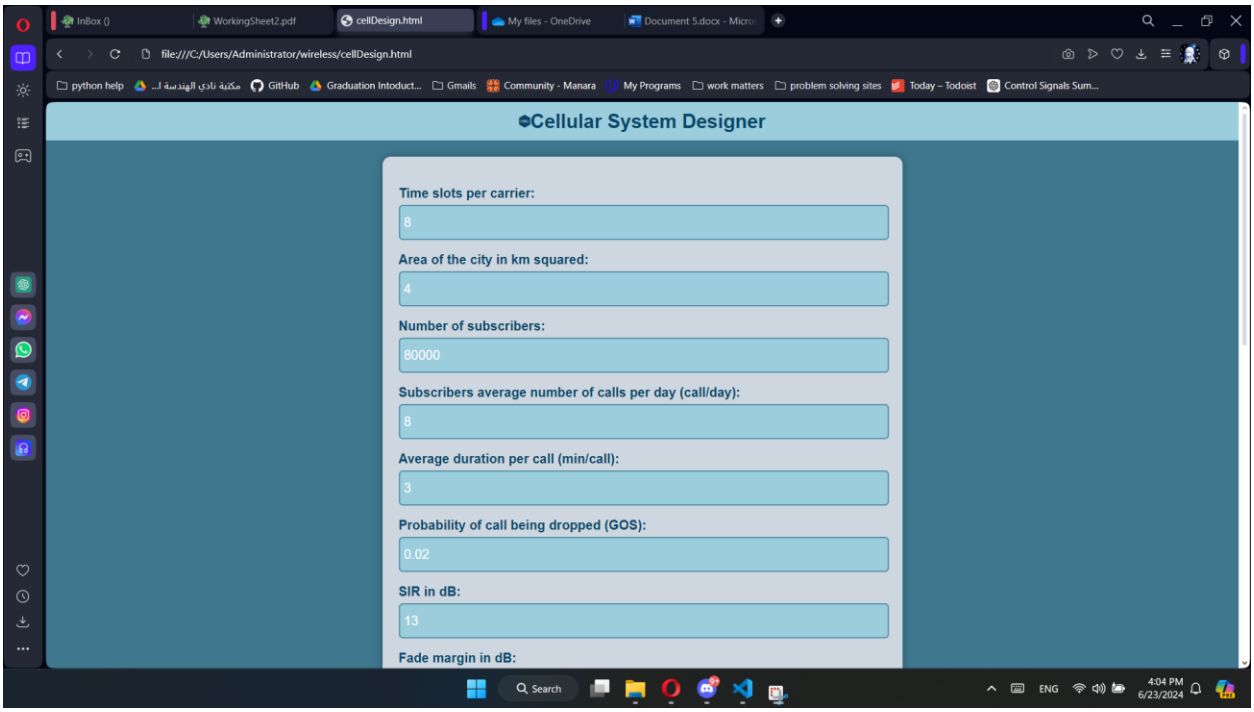


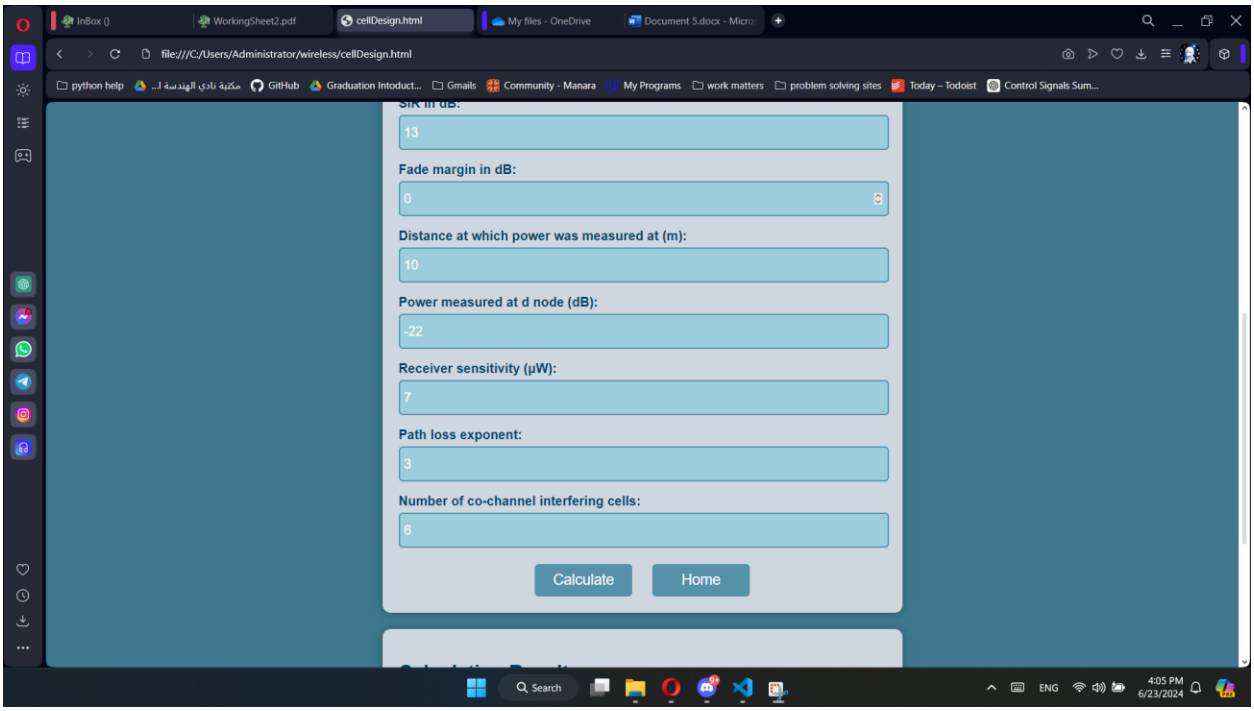
4- Throughput calculator for slotted/unslotted persistent/nonpersistent CSMA, the test case for unslotted nonpersistent CSMA.





5- Cellular system designer

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GitHub
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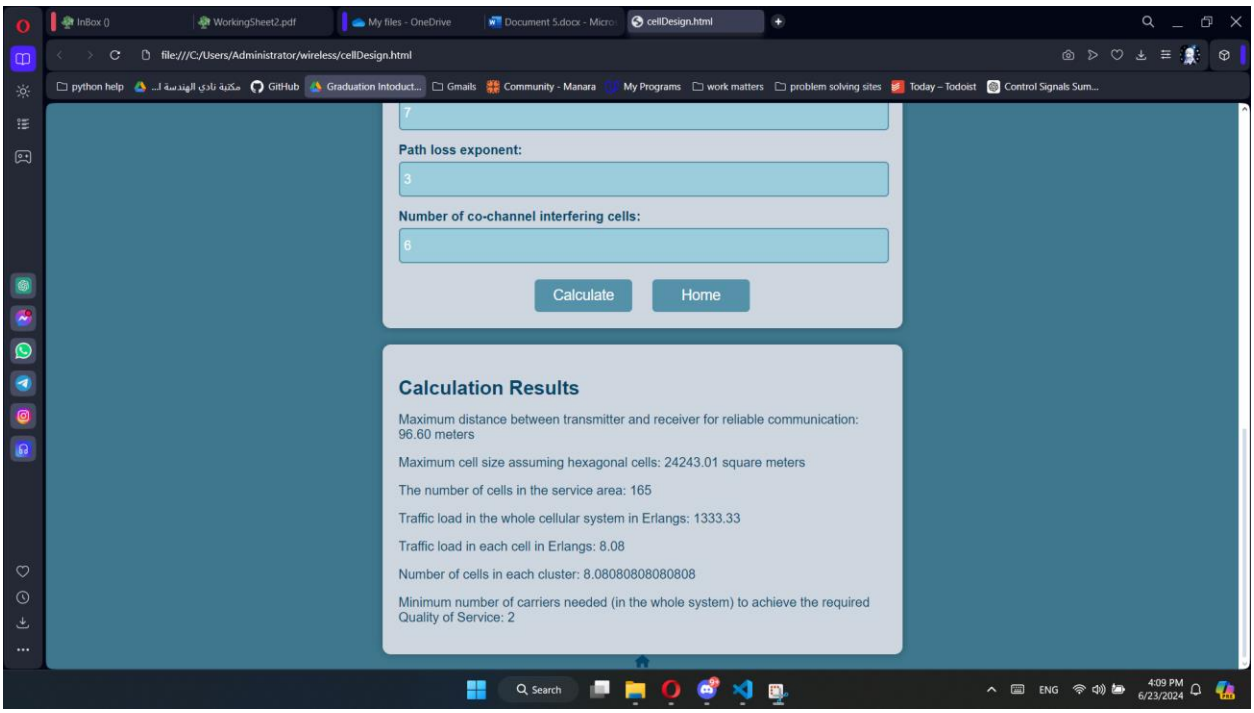
Gmails
Community - Manara
My Programs
work matters
problem solving sites
Today – Todoist
Control Signals Sum...
13
Fade margin in dB:
0
Distance at which power was measured at (m):
10
Power measured at d node (dB):
-22
Receiver sensitivity (μW):
7
Path loss exponent:
3
Number of co-channel interfering cells:
6
Calculate
Home
Search
ENG
4:05 PM
6/23/2024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Document 5.docx - Micro
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Graduation Intoduct...
Gmails
Community - Manara
My Programs
work matters
problem solving sites
Today – Todoist
Control Signals Sum...
7
Path loss exponent:
3
Number of co-channel interfering cells:
6
Calculate
Home
Calculation Results
Maximum distance between transmitter and receiver for reliable communication: 96.60 meters
Maximum cell size assuming hexagonal cells: 24243.01 square meters
The number of cells in the service area: 165
Traffic load in the whole cellular system in Erlangs: 1333.33
Traffic load in each cell in Erlangs: 8.08
Number of cells in each cluster: 8.08080808080808
Minimum number of carriers needed (in the whole system) to achieve the required Quality of Service: 2
Search
ENG
4:09 PM
6/23/2024