ASSURANCE OR LEARNING

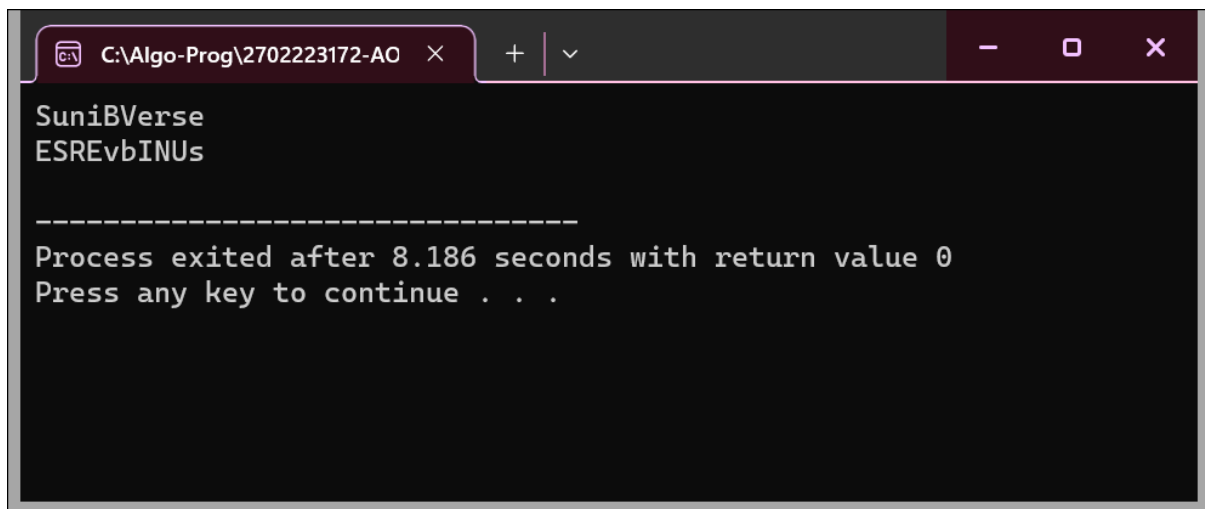# ALGORITHM AND PROGRAMMING

Nama : Vincentia Angelica Boone

NIM : 2702223172
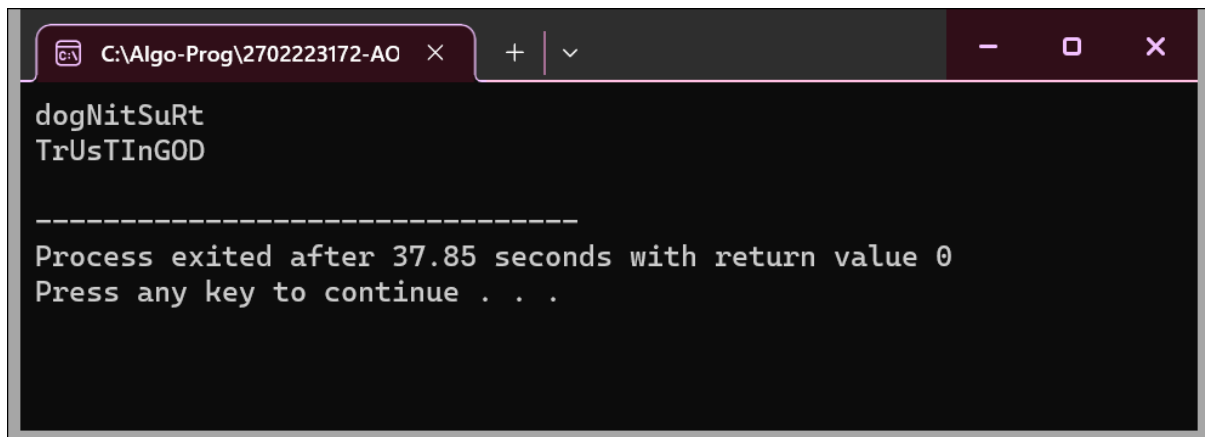
Kelas : LN01

CASE 1 – Inverse String
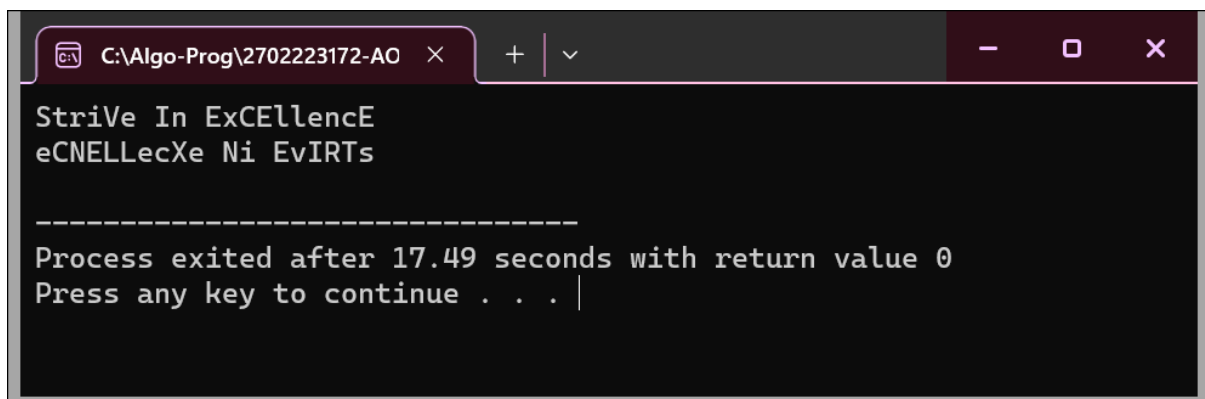
```
SuniBVerse
ESREvbINUs


----------------------------------
Process exited after 8.186 seconds with return value 0
Press any key to continue . . .
```

```
dogNitSuRt
TrUsTInGOD


----------------------------------
Process exited after 37.85 seconds with return value 0
Press any key to continue . . .
```

```
StriVe In ExCEllencE
eCNELLecXe Ni EvIRTs


----------------------------------
Process exited after 17.49 seconds with return value 0
Press any key to continue . . .
```

CASE 2 - Menu

DISPLAY DATA – 5 ROWS

```
======= MENU =======
What do you want to do?
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 1
Number of rows : 5
Just like the way you requested
Here it is . . . .

+----------------------------------------------------------------------------------------------------+
|   LOCATION     |    CITY      |  PRICE   |  ROOMS   | BATHROOMS | CARPARK  |    TYPE    |  FURNISH   |
+----------------------------------------------------------------------------------------------------+
| Mont-Kiara     | Kuala-Lumpur | 1000000  | 2        | 2         | 0        | Built-up   | Partly     |
----------------------------------------------------------------------------------------------------
| Cheras         | Kuala-Lumpur | 310000   | 3        | 2         | 0        | Built-up   | Partly     |
----------------------------------------------------------------------------------------------------
| Kepong         | Kuala-Lumpur | 358000   | 3        | 3         | 0        | Built-up   | Partly     |
----------------------------------------------------------------------------------------------------
| Taman-Desa     | Kuala-Lumpur | 455000   | 2        | 2         | 0        | Built-up   | Partly     |
----------------------------------------------------------------------------------------------------
| Kepong         | Kuala-Lumpur | 358000   | 3        | 3         | 0        | Built-up   | Partly     |
----------------------------------------------------------------------------------------------------

Press ENTER to leave
```

SEARCH DATA

LOCATION – JAKARTA (Not Found)

```
======= MENU =======
What do you want to do?
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 2
Choose column : location
What are you searching for? jakarta

No data to show:(

Press ENTER to leave
```

LOCATION – JINJANG

```
C:\Algo-Prog\2702223172-AO    ×    +  ∨                                                    –   □   ×
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 2
Choose column : locatoin
Sorry, I cant find what you're looking for :(
Choose column : location
What are you searching for? jinjang
Found it! Let me show you the details . . . .
+----------------------------------------------------------------------------------------------------+
|    LOCATION     |     CITY     |   PRICE   |   ROOMS   |  BATHROOMS  |  CARPARK   |    TYPE     |   FURNISH     |
+----------------------------------------------------------------------------------------------------+
| Jinjang         | Kuala-Lumpur | 560000    | 3         | 2           | 0          | Built-up    | Partly        |
------------------------------------------------------------------------------------------------------
| Jinjang         | Kuala-Lumpur | 720000    | 5         | 2           | 0          | Land-area   | Unfurnished   |
------------------------------------------------------------------------------------------------------
| Jinjang         | Kuala-Lumpur | 1200000   | 5         | 4           | 0          | Built-up    | Partly        |
------------------------------------------------------------------------------------------------------
| Jinjang         | Kuala-Lumpur | 2400000   | 4         | 3           | 0          | Land-area   | Partly        |
------------------------------------------------------------------------------------------------------
| Jinjang         | Kuala-Lumpur | 145000    | 3         | 2           | 0          | Built-up    | Partly        |
------------------------------------------------------------------------------------------------------
| Jinjang         | Kuala-Lumpur | 178000    | 3         | 2           | 0          | Built-up    | Partly        |
------------------------------------------------------------------------------------------------------
| Jinjang         | Kuala-Lumpur | 190000    | 3         | 2           | 0          | Built-up    | Partly        |
------------------------------------------------------------------------------------------------------
| Jinjang         | Kuala-Lumpur | 189000    | 3         | 2           | 0          | Built-up    | Partly        |
------------------------------------------------------------------------------------------------------
| Jinjang         | Kuala-Lumpur | 870000    | 4         | 3           | 0          | Land-area   | Unfurnished   |
------------------------------------------------------------------------------------------------------
Thats all!

Press ENTER to leave
```

CITY – KUALA-LUMPUR

```
C:\Algo-Prog\2702223172-AO    ×    +  ∨                                                    –   □   ×
======= MENU =======
What do you want to do?
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 2
Choose column : city
What are you searching for? kuala-lumpur
Found it! Let me show you the details . . . .
+----------------------------------------------------------------------------------------------------+
|    LOCATION       |     CITY     |   PRICE   |   ROOMS   |  BATHROOMS  |  CARPARK   |    TYPE     |   FURNISH    |
+----------------------------------------------------------------------------------------------------+
| Mont-Kiara        | Kuala-Lumpur | 1000000   | 2         | 2           | 0          | Built-up    | Partly       |
------------------------------------------------------------------------------------------------------
| Cheras            | Kuala-Lumpur | 310000    | 3         | 2           | 0          | Built-up    | Partly       |
------------------------------------------------------------------------------------------------------
| Kepong            | Kuala-Lumpur | 358000    | 3         | 3           | 0          | Built-up    | Partly       |
------------------------------------------------------------------------------------------------------
| Taman-Desa        | Kuala-Lumpur | 455000    | 2         | 2           | 0          | Built-up    | Partly       |
------------------------------------------------------------------------------------------------------
| Kepong            | Kuala-Lumpur | 358000    | 3         | 3           | 0          | Built-up    | Partly       |
------------------------------------------------------------------------------------------------------
| Kepong            | Kuala-Lumpur | 358000    | 3         | 3           | 0          | Built-up    | Partly       |
------------------------------------------------------------------------------------------------------
| Bukit-Jalil       | Kuala-Lumpur | 505000    | 3         | 2           | 0          | Built-up    | Partly       |
------------------------------------------------------------------------------------------------------
| Jalan-Klang-Lama  | Kuala-Lumpur | 410000    | 3         | 2           | 0          | Built-up    | Partly       |
------------------------------------------------------------------------------------------------------
| Setapak           | Kuala-Lumpur | 278000    | 3         | 2           | 0          | Built-up    | Partly       |
------------------------------------------------------------------------------------------------------
| Sentul            | Kuala-Lumpur | 688000    | 3         | 2           | 0          | Built-up    | Fully        |
------------------------------------------------------------------------------------------------------
Do you want to see more data [y or n]?
```

PRICE – 278000

```
======== MENU ========
What do you want to do?
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 2
Choose column : price
What are you searching for? 278000
Found it! Let me show you the details . . . .
+-----------------------------------------------------------------------------------------------------------------+
|      LOCATION     |     CITY      |   PRICE   |   ROOMS   |  BATHROOMS  |  CARPARK  |    TYPE     |   FURNISH     |
+-----------------------------------------------------------------------------------------------------------------+
| Setapak           | Kuala-Lumpur  | 278000    | 3         | 2           | 0         | Built-up    | Partly        |
-------------------------------------------------------------------------------------------------------------------
| Jalan-Klang-Lama  | Kuala-Lumpur  | 278000    | 3         | 2           | 0         | Built-up    | Unfurnished   |
-------------------------------------------------------------------------------------------------------------------
Thats all!

Press ENTER to leave
```

ROOMS – 3

```
======== MENU ========
What do you want to do?
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 2
Choose column : rooms
What are you searching for? 3
Found it! Let me show you the details . . . .
+-----------------------------------------------------------------------------------------------------------------+
|      LOCATION     |     CITY      |   PRICE   |   ROOMS   |  BATHROOMS  |  CARPARK  |    TYPE     |   FURNISH     |
+-----------------------------------------------------------------------------------------------------------------+
| Cheras            | Kuala-Lumpur  | 310000    | 3         | 2           | 0         | Built-up    | Partly        |
-------------------------------------------------------------------------------------------------------------------
| Kepong            | Kuala-Lumpur  | 358000    | 3         | 3           | 0         | Built-up    | Partly        |
-------------------------------------------------------------------------------------------------------------------
| Kepong            | Kuala-Lumpur  | 358000    | 3         | 3           | 0         | Built-up    | Partly        |
-------------------------------------------------------------------------------------------------------------------
| Kepong            | Kuala-Lumpur  | 358000    | 3         | 3           | 0         | Built-up    | Partly        |
-------------------------------------------------------------------------------------------------------------------
| Bukit-Jalil       | Kuala-Lumpur  | 505000    | 3         | 2           | 0         | Built-up    | Partly        |
-------------------------------------------------------------------------------------------------------------------
| Jalan-Klang-Lama  | Kuala-Lumpur  | 410000    | 3         | 2           | 0         | Built-up    | Partly        |
-------------------------------------------------------------------------------------------------------------------
| Setapak           | Kuala-Lumpur  | 278000    | 3         | 2           | 0         | Built-up    | Partly        |
-------------------------------------------------------------------------------------------------------------------
| Sentul            | Kuala-Lumpur  | 688000    | 3         | 2           | 0         | Built-up    | Fully         |
-------------------------------------------------------------------------------------------------------------------
| Jalan-Klang-Lama  | Kuala-Lumpur  | 338000    | 3         | 2           | 0         | Built-up    | Partly        |
-------------------------------------------------------------------------------------------------------------------
| Jalan-Klang-Lama  | Kuala-Lumpur  | 400000    | 3         | 2           | 0         | Built-up    | Unfurnished   |
-------------------------------------------------------------------------------------------------------------------
Do you want to see more data [y or n]?
```

BATHROOMS – 3

```
======== MENU ========
What do you want to do?
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 2
Choose column : bathrooms
What are you searching for? 3
Found it! Let me show you the details . . . .
+-----------------------------------------------------------------------------------------------------------------+
|     LOCATION     |      CITY      |   PRICE   |   ROOMS   |  BATHROOMS  |  CARPARK  |    TYPE    |   FURNISH    |
+-----------------------------------------------------------------------------------------------------------------+
| Kepong           | Kuala-Lumpur   | 358000    | 3         | 3           | 0         | Built-up   | Partly       |
-------------------------------------------------------------------------------------------------------------------
| Kepong           | Kuala-Lumpur   | 358000    | 3         | 3           | 0         | Built-up   | Partly       |
-------------------------------------------------------------------------------------------------------------------
| Kepong           | Kuala-Lumpur   | 358000    | 3         | 3           | 0         | Built-up   | Partly       |
-------------------------------------------------------------------------------------------------------------------
| Cheras           | Kuala-Lumpur   | 560000    | 3         | 3           | 0         | Built-up   | Unfurnished  |
-------------------------------------------------------------------------------------------------------------------
| Jalan-Kuching    | Kuala-Lumpur   | 618000    | 3         | 3           | 0         | Built-up   | Partly       |
-------------------------------------------------------------------------------------------------------------------
| Sri-Petaling     | Kuala-Lumpur   | 390000    | 3         | 3           | 0         | Built-up   | Partly       |
-------------------------------------------------------------------------------------------------------------------
| Bukit-Bintang    | Kuala-Lumpur   | 980000    | 3         | 3           | 0         | Built-up   | Partly       |
-------------------------------------------------------------------------------------------------------------------
| KL-Sentral       | Kuala-Lumpur   | 1111000   | 3         | 3           | 0         | Built-up   | Partly       |
-------------------------------------------------------------------------------------------------------------------
| Salak-Selatan    | Kuala-Lumpur   | 458000    | 3         | 3           | 0         | Built-up   | Fully        |
-------------------------------------------------------------------------------------------------------------------
| Sungai-Besi      | Kuala-Lumpur   | 450000    | 3         | 3           | 0         | Built-up   | Fully        |
-------------------------------------------------------------------------------------------------------------------
Do you want to see more data [y or n]? n
```

CAR PARKS – 1

```
======== MENU ========
What do you want to do?
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 2
Choose column : carparks
What are you searching for? 1

No data to show:(

Press ENTER to leave
```

TYPE – LAND-AREA

```
======= MENU =======
What do you want to do?
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 2
Choose column : type
What are you searching for? land-area
Found it! Let me show you the details . . . .
+------------------------------------------------------------------------------------------------------------------------------+
|     LOCATION      |     CITY     |   PRICE    |   ROOMS   |  BATHROOMS  |  CARPARK   |     TYPE      |   FURNISH    |
+------------------------------------------------------------------------------------------------------------------------------+
| Sungai-Besi       | Kuala-Lumpur | 1450000    | 5         | 4           | 0          | Land-area     | Partly       |
---------------------------------------------------------------------------------------------------------------------------------
| Ampang            | Kuala-Lumpur | 8000000    | 5         | 5           | 0          | Land-area     | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Bangsar           | Kuala-Lumpur | 5900000    | 5         | 6           | 0          | Land-area     | Partly       |
---------------------------------------------------------------------------------------------------------------------------------
| Damansara-Heights | Kuala-Lumpur | 4200000    | 4         | 4           | 0          | Land-area     | Partly       |
---------------------------------------------------------------------------------------------------------------------------------
| Damansara-Heights | Kuala-Lumpur | 14500000   | 7         | 7           | 0          | Land-area     | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Damansara-Heights | Kuala-Lumpur | 14000000   | 7         | 7           | 0          | Land-area     | Partly       |
---------------------------------------------------------------------------------------------------------------------------------
| Damansara-Heights | Kuala-Lumpur | 7300000    | 5         | 6           | 0          | Land-area     | Partly       |
---------------------------------------------------------------------------------------------------------------------------------
| Cheras            | Kuala-Lumpur | 3500000    | 7         | 4           | 0          | Land-area     | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Seputeh           | Kuala-Lumpur | 720000     | 2         | 2           | 0          | Land-area     | Partly       |
---------------------------------------------------------------------------------------------------------------------------------
| Seputeh           | Kuala-Lumpur | 700000     | 2         | 2           | 0          | Land-area     | Partly       |
---------------------------------------------------------------------------------------------------------------------------------
Do you want to see more data [y or n]?
```

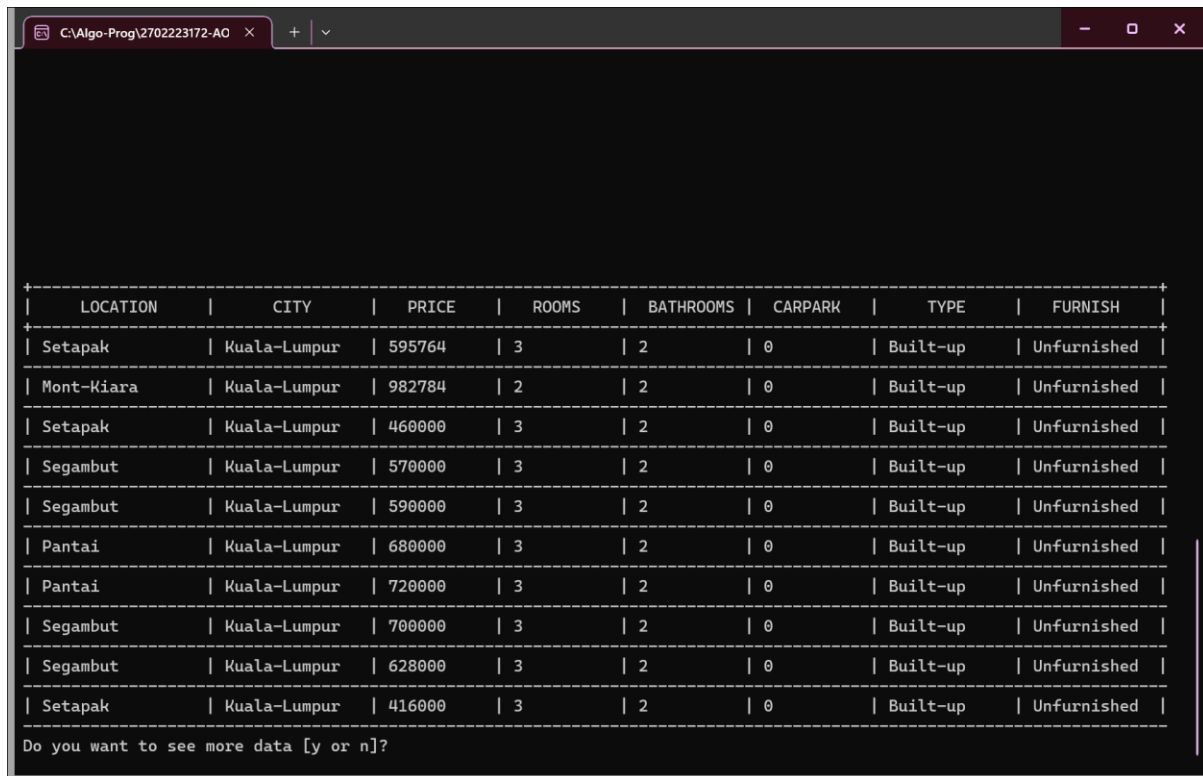## FURNISH – UNFURNISHED

```
======= MENU =======
What do you want to do?
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 2
Choose column : furnish
What are you searching for? unfurnished
Found it! Let me show you the details . . . .
+------------------------------------------------------------------------------------------------------------------------------+
|     LOCATION      |     CITY     |   PRICE    |   ROOMS   |  BATHROOMS  |  CARPARK   |     TYPE      |   FURNISH    |
+------------------------------------------------------------------------------------------------------------------------------+
| Jalan-Klang-Lama  | Kuala-Lumpur | 400000     | 3         | 2           | 0          | Built-up      | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Desa-ParkCity     | Kuala-Lumpur | 909000     | 2         | 2           | 0          | Built-up      | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Taman-Melawati    | Kuala-Lumpur | 500000     | 3         | 2           | 0          | Built-up      | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Cheras            | Kuala-Lumpur | 430000     | 3         | 2           | 0          | Built-up      | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Taman-Melawati    | Kuala-Lumpur | 500000     | 3         | 2           | 0          | Built-up      | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Setapak           | Kuala-Lumpur | 395000     | 3         | 2           | 0          | Built-up      | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Cheras            | Kuala-Lumpur | 560000     | 3         | 3           | 0          | Built-up      | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Cheras            | Kuala-Lumpur | 555000     | 3         | 2           | 0          | Built-up      | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Cheras            | Kuala-Lumpur | 388000     | 4         | 2           | 0          | Built-up      | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
| Setapak           | Kuala-Lumpur | 595764     | 3         | 2           | 0          | Built-up      | Unfurnished  |
---------------------------------------------------------------------------------------------------------------------------------
Do you want to see more data [y or n]?
```

IF I INPUT y, THEN SYSTEM WILL SHOW MORE DATA

```
+----------------------------------------------------------------------------------------------------------+
|    LOCATION    |     CITY     |   PRICE    |  ROOMS   |  BATHROOMS  |  CARPARK  |    TYPE    |   FURNISH    |
+----------------------------------------------------------------------------------------------------------+
| Setapak        | Kuala-Lumpur | 595764     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Mont-Kiara     | Kuala-Lumpur | 982784     | 2        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Setapak        | Kuala-Lumpur | 460000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Segambut       | Kuala-Lumpur | 570000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Segambut       | Kuala-Lumpur | 590000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Pantai         | Kuala-Lumpur | 680000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Pantai         | Kuala-Lumpur | 720000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Segambut       | Kuala-Lumpur | 700000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Segambut       | Kuala-Lumpur | 628000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Setapak        | Kuala-Lumpur | 416000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
Do you want to see more data [y or n]?
```

ELSE IF I INPUT n, SYSTEM WILL RETURN TO MENU

```
+----------------------------------------------------------------------------------------------------------+
|    LOCATION    |     CITY     |   PRICE    |  ROOMS   |  BATHROOMS  |  CARPARK  |    TYPE    |   FURNISH    |
+----------------------------------------------------------------------------------------------------------+
| Setapak        | Kuala-Lumpur | 595764     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Mont-Kiara     | Kuala-Lumpur | 982784     | 2        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Setapak        | Kuala-Lumpur | 460000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Segambut       | Kuala-Lumpur | 570000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Segambut       | Kuala-Lumpur | 590000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Pantai         | Kuala-Lumpur | 680000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Pantai         | Kuala-Lumpur | 720000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Segambut       | Kuala-Lumpur | 700000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Segambut       | Kuala-Lumpur | 628000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
| Setapak        | Kuala-Lumpur | 416000     | 3        | 2           | 0         | Built-up   | Unfurnished  |
----------------------------------------------------------------------------------------------------------
Do you want to see more data [y or n]? n

Press ENTER to leave
```

SORTING DATA

LOCATION – ASC

```
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : location
Sort ascending or descending [asc or desc]? asc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
Alam-Damai	Kuala-Lumpur	880000	4	4	0	Land-area	Partly
Ampang	Kuala-Lumpur	1550000	2	2	0	Built-up	Fully
Ampang	Kuala-Lumpur	690822	2	2	0	Built-up	Partly
Ampang	Kuala-Lumpur	690822	2	2	0	Built-up	Partly
Ampang	Kuala-Lumpur	690822	2	2	0	Built-up	Partly
Ampang	Kuala-Lumpur	690822	2	2	0	Built-up	Partly
Ampang	Kuala-Lumpur	700000	1	2	0	Built-up	Partly
Ampang	Kuala-Lumpur	680000	3	2	0	Built-up	Fully
Ampang	Kuala-Lumpur	780000	3	2	0	Built-up	Fully
Ampang	Kuala-Lumpur	630000	2	1	0	Built-up	Fully

```
Do you want to see more data [y or n]?
```

LOCATION – DESC

```
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : location
Sort ascending or descending [asc or desc]? desc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
Wangsa-Maju	Kuala-Lumpur	710000	3	2	0	Built-up	Fully
Wangsa-Maju	Kuala-Lumpur	550000	2	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	670000	4	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	480000	3	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	540000	3	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	480000	3	2	0	Built-up	Unfurnished
Wangsa-Maju	Kuala-Lumpur	380000	4	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	460000	3	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	580000	3	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	540000	3	2	0	Built-up	Partly

```
Do you want to see more data [y or n]?
```

CITY – ASC

```
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : city
Sort ascending or descending [asc or desc]? asc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
Alam-Damai	Kuala-Lumpur	880000	4	4	0	Land-area	Partly
Ampang	Kuala-Lumpur	1550000	2	2	0	Built-up	Fully
Ampang	Kuala-Lumpur	690822	2	2	0	Built-up	Partly
Ampang	Kuala-Lumpur	690822	2	2	0	Built-up	Partly
Ampang	Kuala-Lumpur	690822	2	2	0	Built-up	Partly
Ampang	Kuala-Lumpur	690822	2	2	0	Built-up	Partly
Ampang	Kuala-Lumpur	700000	1	2	0	Built-up	Partly
Ampang	Kuala-Lumpur	680000	3	2	0	Built-up	Fully
Ampang	Kuala-Lumpur	780000	3	2	0	Built-up	Fully
Ampang	Kuala-Lumpur	630000	2	1	0	Built-up	Fully

```
Do you want to see more data [y or n]?
```

CITY – DESC

```
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : city
Sort ascending or descending [asc or desc]? desc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
Wangsa-Maju	Kuala-Lumpur	710000	3	2	0	Built-up	Fully
Wangsa-Maju	Kuala-Lumpur	550000	2	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	670000	4	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	480000	3	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	540000	3	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	480000	3	2	0	Built-up	Unfurnished
Wangsa-Maju	Kuala-Lumpur	380000	4	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	460000	3	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	580000	3	2	0	Built-up	Partly
Wangsa-Maju	Kuala-Lumpur	540000	3	2	0	Built-up	Partly

```
Do you want to see more data [y or n]?
```

PRICE – ASC

```
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : price
Sort ascending or descending [asc or desc]? asc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
Bukit-Jalil	Kuala-Lumpur	1500	4	2	0	Built-up	Fully
Jalan-Klang-Lama	Kuala-Lumpur	1500	3	2	0	Built-up	Partly
Kepong	Kuala-Lumpur	1600	4	3	0	Land-area	Unfurnished
Salak-Selatan	Kuala-Lumpur	1600	1	1	0	Built-up	Fully
Cheras	Kuala-Lumpur	1800	3	2	0	Built-up	Fully
Sri-Hartamas	Kuala-Lumpur	1820	1	1	0	Built-up	Fully
Cheras	Kuala-Lumpur	2000	3	2	0	Built-up	Fully
Sri-Hartamas	Kuala-Lumpur	2100	2	1	0	Land-area	Unfurnished
Jalan-Klang-Lama	Kuala-Lumpur	2200	3	2	0	Built-up	Partly
Setapak	Kuala-Lumpur	2200	3	2	0	Built-up	Partly

```
Do you want to see more data [y or n]?
```

PRICE – DESC

```
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : price
Sort ascending or descending [asc or desc]? desc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
Bukit-Tunku	Kuala-Lumpur	40000000	9	9	0	Land-area	Partly
Ampang-Hilir	Kuala-Lumpur	30000000	9	9	0	Land-area	Unfurnished
KL-City	Kuala-Lumpur	28000000	5	6	0	Land-area	Partly
Damansara-Heights	Kuala-Lumpur	22000000	8	9	0	Land-area	Fully
Ampang-Hilir	Kuala-Lumpur	20000000	7	8	0	Built-up	Unfurnished
Ampang	Kuala-Lumpur	20000000	8	7	0	Land-area	Partly
KL-City	Kuala-Lumpur	18000000	6	6	0	Land-area	Partly
Damansara-Heights	Kuala-Lumpur	18000000	9	9	0	Built-up	Partly
Bangsar	Kuala-Lumpur	18000000	8	7	0	Land-area	Partly
Bukit-Tunku	Kuala-Lumpur	17000000	5	5	0	Land-area	Partly

```
Do you want to see more data [y or n]?
```

ROOMS – ASC

```
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : rooms
Sort ascending or descending [asc or desc]? asc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
Salak-Selatan	Kuala-Lumpur	1600	1	1	0	Built-up	Fully
Sri-Hartamas	Kuala-Lumpur	1820	1	1	0	Built-up	Fully
KL-City	Kuala-Lumpur	2800	1	1	0	Built-up	Fully
Jalan-Klang-Lama	Kuala-Lumpur	200000	1	1	0	Land-area	Unfurnished
Brickfields	Kuala-Lumpur	280000	1	1	0	Built-up	Fully
Sri-Hartamas	Kuala-Lumpur	324000	1	1	0	Land-area	Unfurnished
Setapak	Kuala-Lumpur	325000	1	1	0	Built-up	Partly
Cheras	Kuala-Lumpur	330000	1	1	0	Built-up	Fully
Setapak	Kuala-Lumpur	335000	1	1	0	Built-up	Partly
Cheras	Kuala-Lumpur	345000	1	1	0	Built-up	Partly

```
Do you want to see more data [y or n]?
```

ROOMS – DESC

```
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : rooms
Sort ascending or descending [asc or desc]? desc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
Bukit-Tunku	Kuala-Lumpur	40000000	9	9	0	Land-area	Partly
Ampang-Hilir	Kuala-Lumpur	30000000	9	9	0	Land-area	Unfurnished
Damansara-Heights	Kuala-Lumpur	18000000	9	9	0	Built-up	Partly
Mont-Kiara	Kuala-Lumpur	12800000	9	9	0	Land-area	Partly
Bukit-Tunku	Kuala-Lumpur	12000000	9	7	0	Land-area	Partly
Country-Heights-Damansara	Kuala-Lumpur	10500000	9	9	0	Land-area	Partly
Setiawangsa	Kuala-Lumpur	8500000	9	9	0	Land-area	Partly
Damansara-Heights	Kuala-Lumpur	8300000	9	9	0	Land-area	Partly
Mont-Kiara	Kuala-Lumpur	7600000	9	9	0	Land-area	Unfurnished
Damansara	Kuala-Lumpur	7200000	9	9	0	Land-area	Partly

```
Do you want to see more data [y or n]?
```

BATHROOMS – ASC

```
C:\Algo-Prog\2702223172-AO    ×    +  ∨                                    –    □    ×

2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : bathrooms
Sort ascending or descending [asc or desc]? asc
Okay! Please wait! i am sorting the data . . . .
Sorting done!

+-------------------------------------------------------------------------------------------------------+
|    LOCATION      |     CITY      |   PRICE    |   ROOMS    |  BATHROOMS  |  CARPARK   |    TYPE      |   FURNISH    |
+-------------------------------------------------------------------------------------------------------+
| KLCC            | Kuala-Lumpur  | 1308000    | 1          | 0           | 0          | Built-up     | Fully        |
-------------------------------------------------------------------------------------------------------
| Kepong          | Kuala-Lumpur  | 218000     | 2          | 0           | 0          | Land-area    | Unfurnished  |
-------------------------------------------------------------------------------------------------------
| Mont-Kiara      | Kuala-Lumpur  | 1060000    | 2          | 0           | 0          | Built-up     | Fully        |
-------------------------------------------------------------------------------------------------------
| Mont-Kiara      | Kuala-Lumpur  | 1140000    | 2          | 0           | 0          | Built-up     | Fully        |
-------------------------------------------------------------------------------------------------------
| KLCC            | Kuala-Lumpur  | 1250000    | 2          | 0           | 0          | Built-up     | Fully        |
-------------------------------------------------------------------------------------------------------
| KLCC            | Kuala-Lumpur  | 1700000    | 2          | 0           | 0          | Built-up     | Fully        |
-------------------------------------------------------------------------------------------------------
| Wangsa-Maju     | Kuala-Lumpur  | 330000     | 3          | 0           | 0          | Built-up     | Fully        |
-------------------------------------------------------------------------------------------------------
| Cheras          | Kuala-Lumpur  | 383000     | 3          | 0           | 0          | Built-up     | Fully        |
-------------------------------------------------------------------------------------------------------
| Cheras          | Kuala-Lumpur  | 383000     | 3          | 0           | 0          | Built-up     | Fully        |
-------------------------------------------------------------------------------------------------------
| Cheras          | Kuala-Lumpur  | 638000     | 3          | 0           | 0          | Land-area    | Partly       |
-------------------------------------------------------------------------------------------------------

Do you want to see more data [y or n]?
```

BATHROOMS – DESC

```
C:\Algo-Prog\2702223172-AO    ×    +  ∨                                    –    □    ×

3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : bathrooms
Sort ascending or descending [asc or desc]? desc
Okay! Please wait! i am sorting the data . . . .
Sorting done!

+-------------------------------------------------------------------------------------------------------+
|    LOCATION           |     CITY      |   PRICE    |   ROOMS    |  BATHROOMS  |  CARPARK   |    TYPE      |   FURNISH    |
+-------------------------------------------------------------------------------------------------------+
| Bukit-Tunku           | Kuala-Lumpur  | 40000000   | 9          | 9           | 0          | Land-area    | Partly       |
-------------------------------------------------------------------------------------------------------
| Ampang-Hilir          | Kuala-Lumpur  | 30000000   | 9          | 9           | 0          | Land-area    | Unfurnished  |
-------------------------------------------------------------------------------------------------------
| Damansara-Heights     | Kuala-Lumpur  | 18000000   | 9          | 9           | 0          | Built-up     | Partly       |
-------------------------------------------------------------------------------------------------------
| Mont-Kiara            | Kuala-Lumpur  | 12800000   | 9          | 9           | 0          | Land-area    | Partly       |
-------------------------------------------------------------------------------------------------------
| Country-Heights-Damansara | Kuala-Lumpur | 10500000 | 9        | 9           | 0          | Land-area    | Partly       |
                                                                                                        |
-------------------------------------------------------------------------------------------------------
| Setiawangsa           | Kuala-Lumpur  | 8500000    | 9          | 9           | 0          | Land-area    | Partly       |
-------------------------------------------------------------------------------------------------------
| Damansara-Heights     | Kuala-Lumpur  | 8300000    | 9          | 9           | 0          | Land-area    | Partly       |
-------------------------------------------------------------------------------------------------------
| Mont-Kiara            | Kuala-Lumpur  | 7600000    | 9          | 9           | 0          | Land-area    | Unfurnished  |
-------------------------------------------------------------------------------------------------------
| Damansara             | Kuala-Lumpur  | 7200000    | 9          | 9           | 0          | Land-area    | Partly       |
-------------------------------------------------------------------------------------------------------
| Taman-Melawati        | Kuala-Lumpur  | 4800000    | 9          | 9           | 0          | Built-up     | Partly       |
-------------------------------------------------------------------------------------------------------

Do you want to see more data [y or n]?
```

CAR PARKS – ASC

```
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : carparks
Sort ascending or descending [asc or desc]? asc
Okay! Please wait! i am sorting the data . . . .
Sorting done!

+--------------------------------------------------------------------------------------------------------------+
|    LOCATION     |     CITY     |   PRICE    |  ROOMS   |  BATHROOMS  |  CARPARK  |     TYPE     |   FURNISH    |
+--------------------------------------------------------------------------------------------------------------+
| KLCC            | Kuala-Lumpur | 1308000    | 1        | 0           | 0         | Built-up     | Fully        |
----------------------------------------------------------------------------------------------------------------
| Kepong          | Kuala-Lumpur | 218000     | 2        | 0           | 0         | Land-area    | Unfurnished  |
----------------------------------------------------------------------------------------------------------------
| Mont-Kiara      | Kuala-Lumpur | 1060000    | 2        | 0           | 0         | Built-up     | Fully        |
----------------------------------------------------------------------------------------------------------------
| Mont-Kiara      | Kuala-Lumpur | 1140000    | 2        | 0           | 0         | Built-up     | Fully        |
----------------------------------------------------------------------------------------------------------------
| KLCC            | Kuala-Lumpur | 1250000    | 2        | 0           | 0         | Built-up     | Fully        |
----------------------------------------------------------------------------------------------------------------
| KLCC            | Kuala-Lumpur | 1700000    | 2        | 0           | 0         | Built-up     | Fully        |
----------------------------------------------------------------------------------------------------------------
| Wangsa-Maju     | Kuala-Lumpur | 330000     | 3        | 0           | 0         | Built-up     | Fully        |
----------------------------------------------------------------------------------------------------------------
| Cheras          | Kuala-Lumpur | 383000     | 3        | 0           | 0         | Built-up     | Fully        |
----------------------------------------------------------------------------------------------------------------
| Cheras          | Kuala-Lumpur | 383000     | 3        | 0           | 0         | Built-up     | Fully        |
----------------------------------------------------------------------------------------------------------------
| Cheras          | Kuala-Lumpur | 638000     | 3        | 0           | 0         | Land-area    | Partly       |
----------------------------------------------------------------------------------------------------------------

Do you want to see more data [y or n]?
```

CAR PARKS – DESC

```
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : carparks
Sort ascending or descending [asc or desc]? desc
Okay! Please wait! i am sorting the data . . . .
Sorting done!

+--------------------------------------------------------------------------------------------------------------+
|    LOCATION          |     CITY     |   PRICE    |  ROOMS   |  BATHROOMS  |  CARPARK  |     TYPE     |  FURNISH   |
+--------------------------------------------------------------------------------------------------------------+
| Bukit-Tunku              | Kuala-Lumpur | 40000000   | 9        | 9           | 0         | Land-area    | Partly       |
----------------------------------------------------------------------------------------------------------------
| Ampang-Hilir             | Kuala-Lumpur | 30000000   | 9        | 9           | 0         | Land-area    | Unfurnished  |
----------------------------------------------------------------------------------------------------------------
| Damansara-Heights        | Kuala-Lumpur | 18000000   | 9        | 9           | 0         | Built-up     | Partly       |
----------------------------------------------------------------------------------------------------------------
| Mont-Kiara               | Kuala-Lumpur | 12800000   | 9        | 9           | 0         | Land-area    | Partly       |
----------------------------------------------------------------------------------------------------------------
| Country-Heights-Damansara | Kuala-Lumpur | 10500000  | 9        | 9           | 0         | Land-area    | Partly       |
----------------------------------------------------------------------------------------------------------------
| Setiawangsa              | Kuala-Lumpur | 8500000    | 9        | 9           | 0         | Land-area    | Partly       |
----------------------------------------------------------------------------------------------------------------
| Damansara-Heights        | Kuala-Lumpur | 8300000    | 9        | 9           | 0         | Land-area    | Partly       |
----------------------------------------------------------------------------------------------------------------
| Mont-Kiara               | Kuala-Lumpur | 7600000    | 9        | 9           | 0         | Land-area    | Unfurnished  |
----------------------------------------------------------------------------------------------------------------
| Damansara                | Kuala-Lumpur | 7200000    | 9        | 9           | 0         | Land-area    | Partly       |
----------------------------------------------------------------------------------------------------------------
| Taman-Melawati           | Kuala-Lumpur | 4800000    | 9        | 9           | 0         | Built-up     | Partly       |
----------------------------------------------------------------------------------------------------------------

Do you want to see more data [y or n]?
```

TYPE – ASC

```
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : type
Sort ascending or descending [asc or desc]? asc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
KLCC	Kuala-Lumpur	1308000	1	0	0	Built-up	Fully
Mont-Kiara	Kuala-Lumpur	1060000	2	0	0	Built-up	Fully
Mont-Kiara	Kuala-Lumpur	1140000	2	0	0	Built-up	Fully
KLCC	Kuala-Lumpur	1250000	2	0	0	Built-up	Fully
KLCC	Kuala-Lumpur	1700000	2	0	0	Built-up	Fully
Wangsa-Maju	Kuala-Lumpur	330000	3	0	0	Built-up	Fully
Cheras	Kuala-Lumpur	383000	3	0	0	Built-up	Fully
Cheras	Kuala-Lumpur	383000	3	0	0	Built-up	Fully
OUG	Kuala-Lumpur	800000	3	0	0	Built-up	Partly
Bukit-Bintang	Kuala-Lumpur	8800000	4	0	0	Built-up	Partly

```
Do you want to see more data [y or n]?
```

TYPE – DESC

```
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : type
Sort ascending or descending [asc or desc]? desc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
Bukit-Tunku	Kuala-Lumpur	40000000	9	9	0	Land-area	Partly
Ampang-Hilir	Kuala-Lumpur	30000000	9	9	0	Land-area	Unfurnished
Mont-Kiara	Kuala-Lumpur	12800000	9	9	0	Land-area	Partly
Country-Heights-Damansara	Kuala-Lumpur	10500000	9	9	0	Land-area	Partly
Setiawangsa	Kuala-Lumpur	8500000	9	9	0	Land-area	Partly
Damansara-Heights	Kuala-Lumpur	8300000	9	9	0	Land-area	Partly
Mont-Kiara	Kuala-Lumpur	7600000	9	9	0	Land-area	Unfurnished
Damansara	Kuala-Lumpur	7200000	9	9	0	Land-area	Partly
Damansara-Heights	Kuala-Lumpur	22000000	8	9	0	Land-area	Fully
Mont-Kiara	Kuala-Lumpur	12800000	8	9	0	Land-area	Partly

```
Do you want to see more data [y or n]?
```

FURNISH – ASC

```
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 3
Choose column : furnish
Sort ascending or descending [asc or desc]? asc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
KLCC	Kuala-Lumpur	1308000	1	0	0	Built-up	Fully
Mont-Kiara	Kuala-Lumpur	1060000	2	0	0	Built-up	Fully
Mont-Kiara	Kuala-Lumpur	1140000	2	0	0	Built-up	Fully
KLCC	Kuala-Lumpur	1250000	2	0	0	Built-up	Fully
KLCC	Kuala-Lumpur	1700000	2	0	0	Built-up	Fully
Wangsa-Maju	Kuala-Lumpur	330000	3	0	0	Built-up	Fully
Cheras	Kuala-Lumpur	383000	3	0	0	Built-up	Fully
Cheras	Kuala-Lumpur	383000	3	0	0	Built-up	Fully
Kuchai-Lama	Kuala-Lumpur	1850000	5	0	0	Built-up	Fully
Salak-Selatan	Kuala-Lumpur	1600	1	1	0	Built-up	Fully

```
Do you want to see more data [y or n]?
```

FURNISH – DESC

```
5. Exit
Your choice: 3
Choose column : furnish
Sort ascending or descending [asc or desc]? desc
Okay! Please wait! i am sorting the data . . . .
Sorting done!
```

LOCATION	CITY	PRICE	ROOMS	BATHROOMS	CARPARK	TYPE	FURNISH
Ampang-Hilir	Kuala-Lumpur	30000000	9	9	0	Land-area	Unfurnished
Mont-Kiara	Kuala-Lumpur	7600000	9	9	0	Land-area	Unfurnished
Ampang	Kuala-Lumpur	2750000	8	9	0	Land-area	Unfurnished
Ampang	Kuala-Lumpur	2700000	8	9	0	Land-area	Unfurnished
Country-Heights-Damansara	Kuala-Lumpur	11900000	7	9	0	Land-area	Unfurnished
Country-Heights-Damansara	Kuala-Lumpur	11800000	7	9	0	Land-area	Unfurnished
Country-Heights-Damansara	Kuala-Lumpur	8500000	7	9	0	Land-area	Unfurnished
Cheras	Kuala-Lumpur	4313888	8	8	0	Land-area	Unfurnished
Desa-ParkCity	Kuala-Lumpur	5000000	7	8	0	Land-area	Unfurnished
Desa-ParkCity	Kuala-Lumpur	5000000	7	8	0	Land-area	Unfurnished

```
Do you want to see more data [y or n]?
```
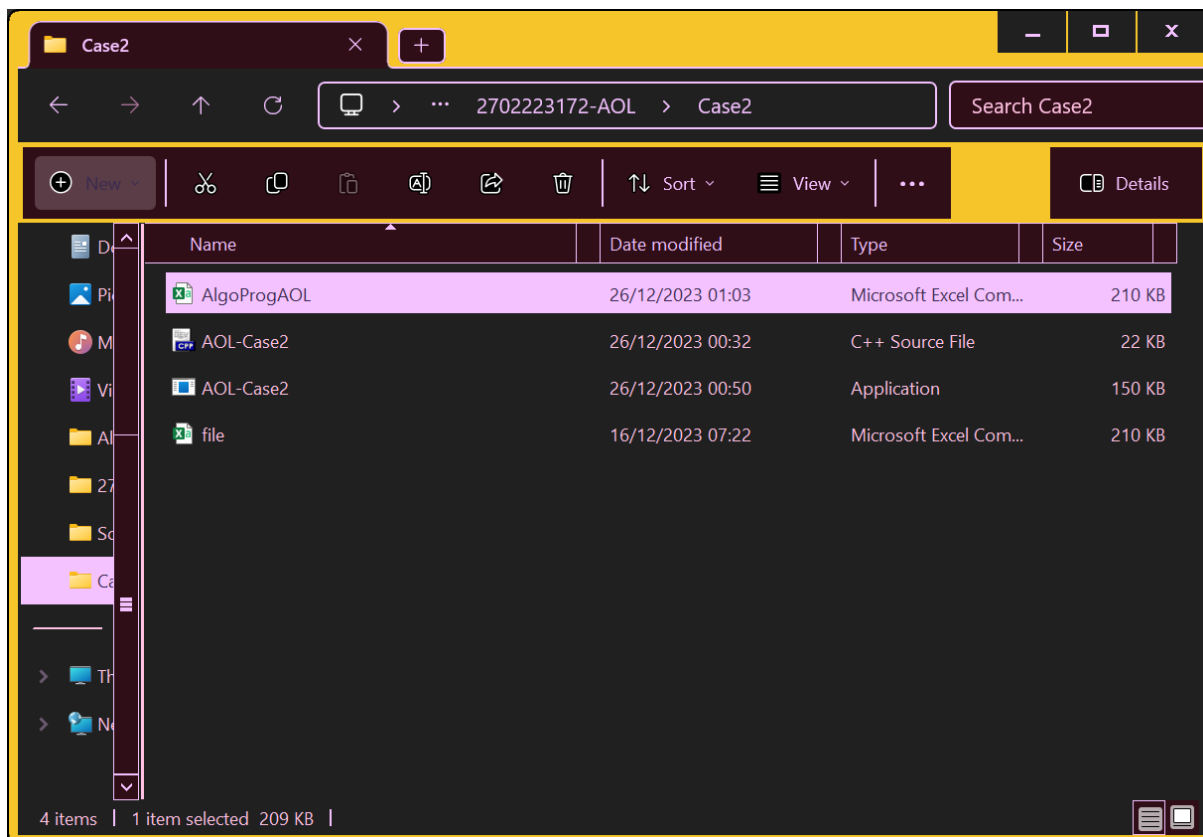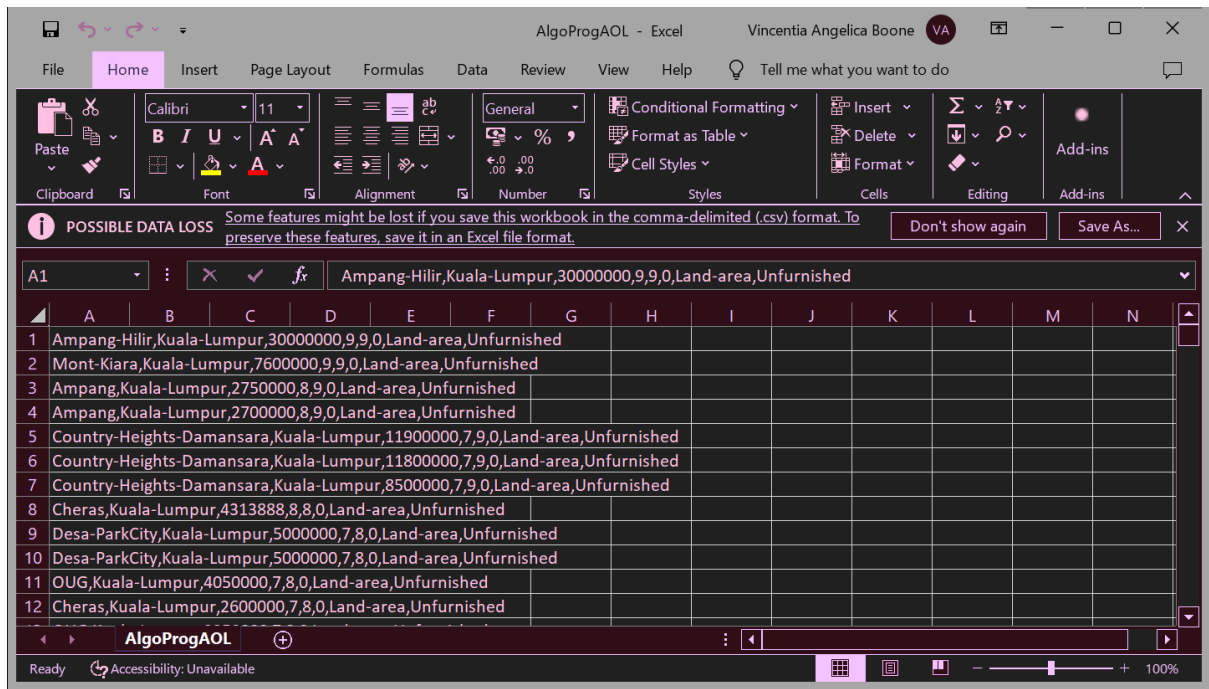
EXPORT DATA – AlgoProgAOL.csv

```
======== MENU ========
What do you want to do?
1. Display data
2. Search data
3. Sort data
4. Export data
5. Exit
Your choice: 4
File Name : AlgoProgAOL
Wait! Exporting data . . . .

Okay! exporting to AlgoProgAOL.csv finished!

Press ENTER to leave
```

Name	Date modified	Type	Size
AlgoProgAOL	26/12/2023 01:03	Microsoft Excel Com...	210 KB
AOL-Case2	26/12/2023 00:32	C++ Source File	22 KB
AOL-Case2	26/12/2023 00:50	Application	150 KB
file	16/12/2023 07:22	Microsoft Excel Com...	210 KB

4 items | 1 item selected 209 KB

EXIT<3


```
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\|___|/

You are leaving the system . . . .

Press ENTER to leave
```