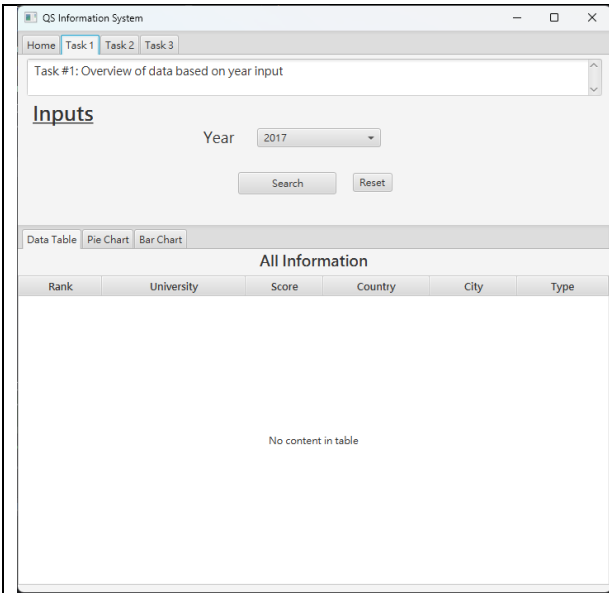
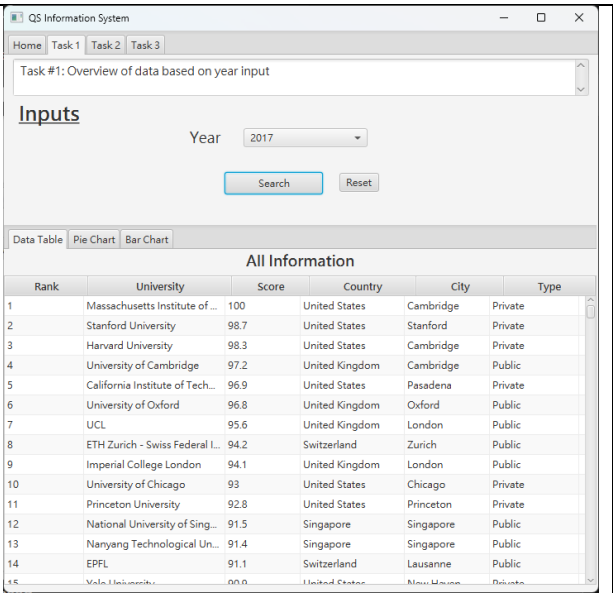


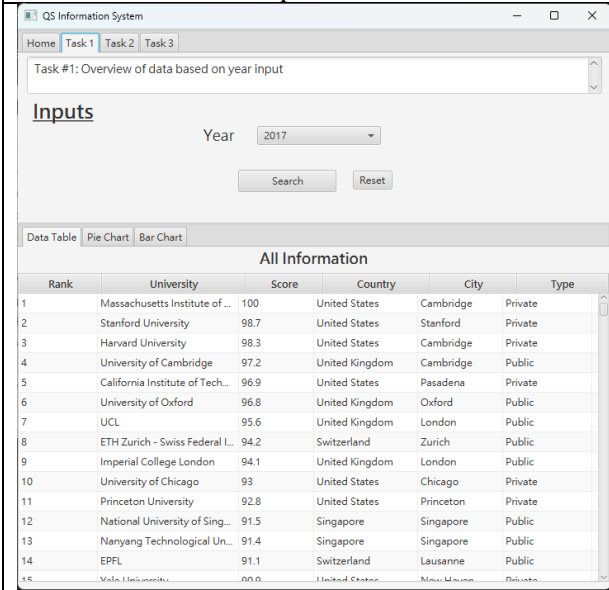
Screenshots of Data-Reporting Task



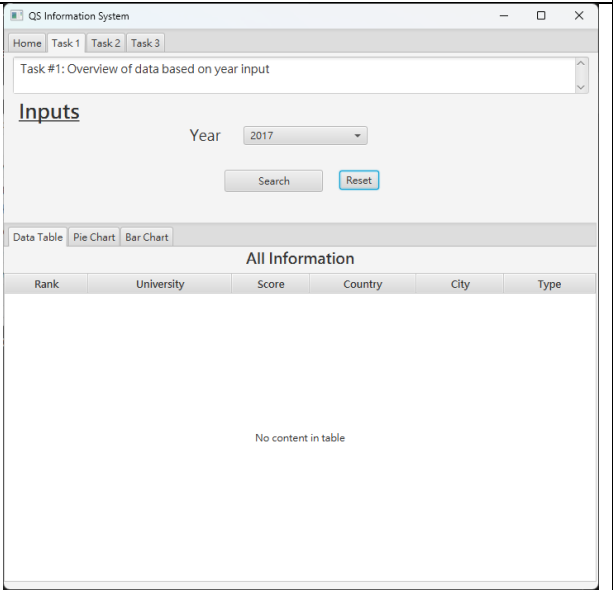
1. When Data Table is selected and Search button is pressed.



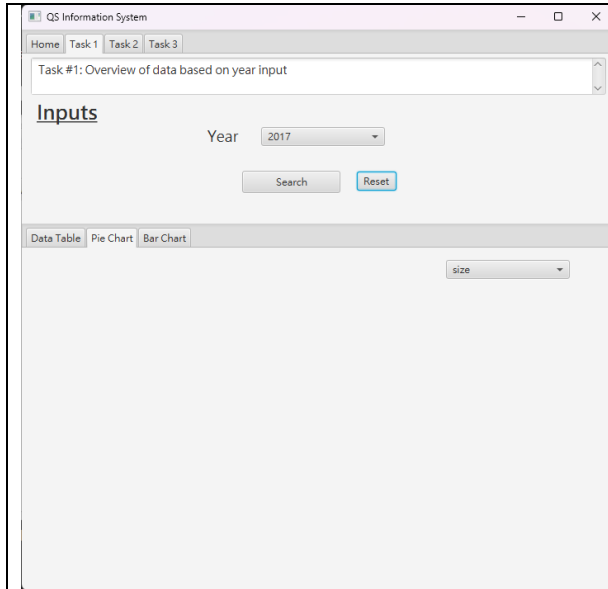
1. The data Table with the specific year is shown.



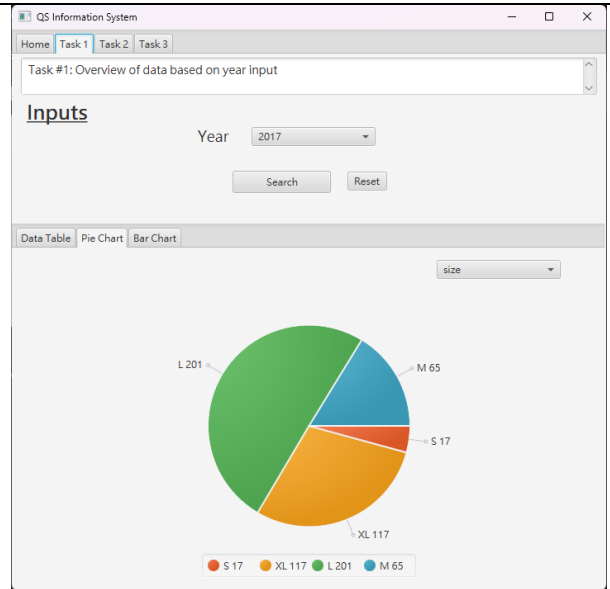
1. When Reset button is pressed.



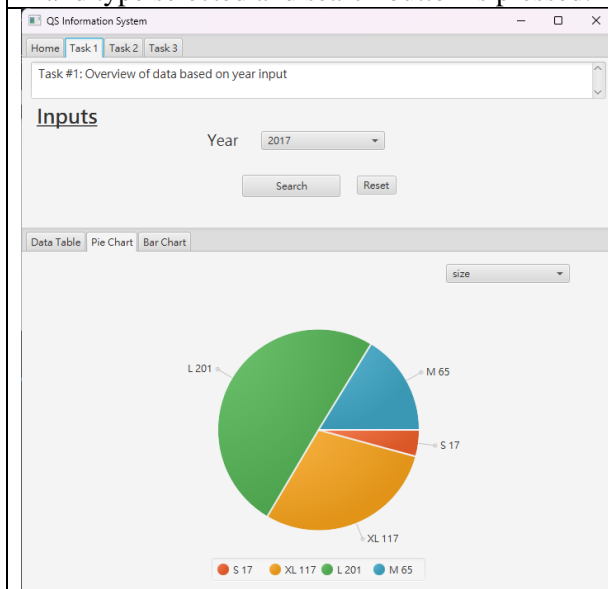
1. Data Table is cleared.



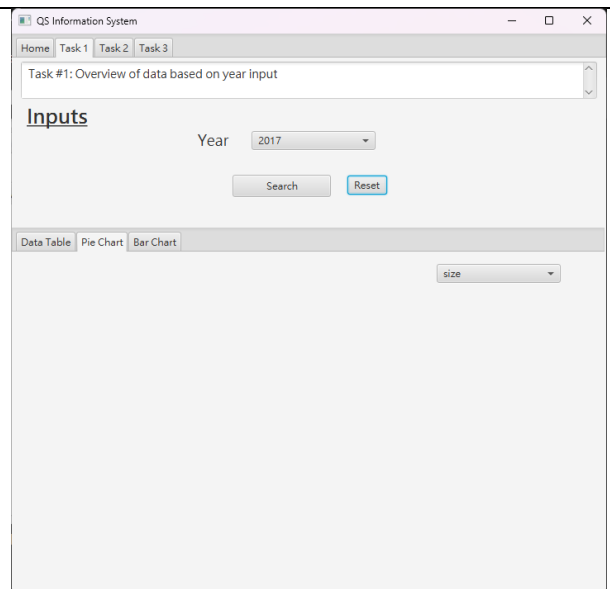
2. When Pie Chart is selected with specific year and type selected and search button is pressed.



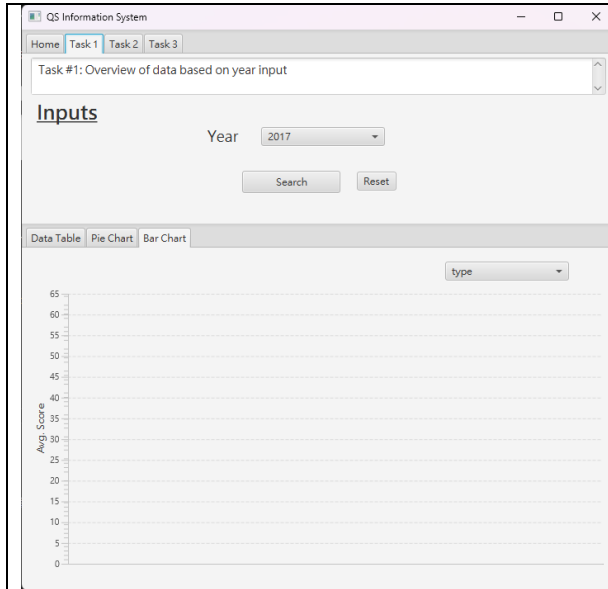
2. Pie Chart is shown.



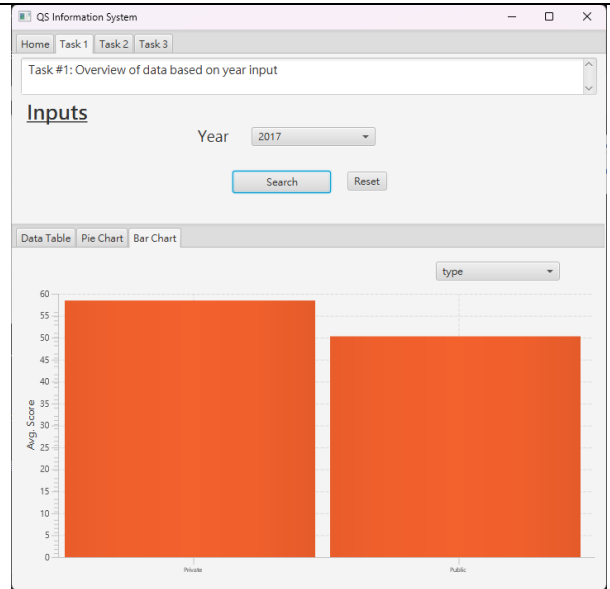
2. When Reset button is pressed.



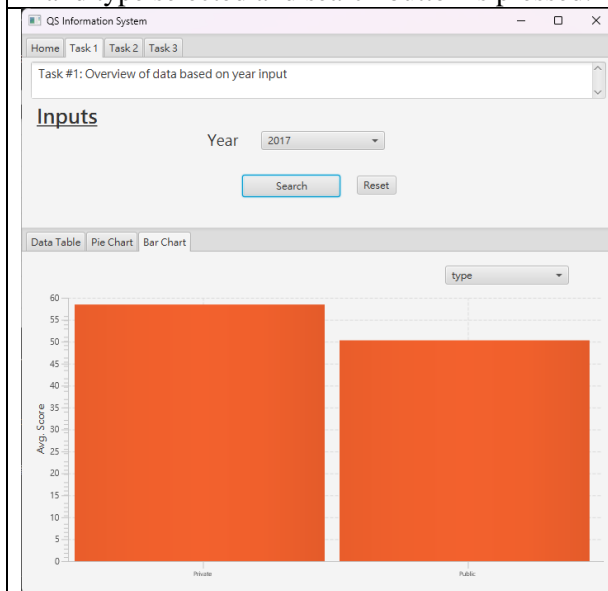
2. Pie Chart is clear.



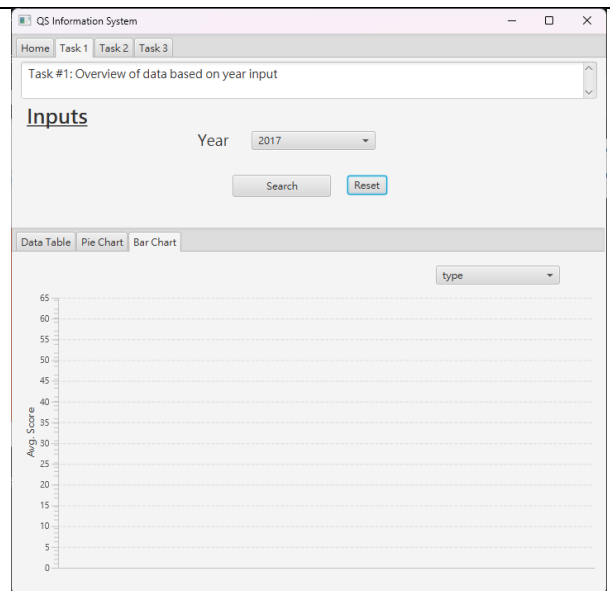
3. When Bar Chart is selected with specific year and type selected and search button is pressed.



3. Bar Chart is shown.



3. When Reset button is pressed.



3. BarChart is clear.

Screenshots of Recommendation Task

QS Information System

Home Task 1 Task 2 Task 3

Task # 3: University suggestion based on user input

Ranking Range Top Bottom

Type

All

Region

All

Recommend Reset

Recommendation

Based on your input these universities you can prefer for higher education

University	The Best Year of Rank	The Best Rank	The Most Recent Year	Rank of The Most Recent Year
No content in table				

Interface without any input.

QS Information System

Home Task 1 Task 2 Task 3

Task # 3: University suggestion based on user input

Ranking Range Top Bottom

Type

All

Region

Asia

Country

All

Recommend Reset

Recommendation

Based on your input these universities you can prefer for higher education

University	The Best Year of Rank	The Best Rank	The Most Recent Year	Rank of The Most Recent Year
No content in table				

After choosing a region, country choice appears.

Example: Input (with “Recommend” button pressed) and Output

QS Information System

Home Task 1 Task 2 Task 3

Task # 3: University suggestion based on user input

Ranking Range Top Bottom

Type

All

Region

All

Recommend Reset

Recommendation

Based on your input these universities you can prefer for higher education

University	The Best Year of Rank	The Best Rank	The Most Recent Year	Rank of The Most Recent Year
No content in table				

1. Without specified rank range.

QS Information System

Home Task 1 Task 2 Task 3

Task # 3: University suggestion based on user input

Ranking Range Top Bottom

Type

All

Region

All

Recommend Reset

Recommendation

Based on your input these universities you can prefer for higher education

University	The Best Year of Rank	The Best Rank	The Most Recent Year	Rank of The Most Recent Year
No content in table				

2. Non-integer input for the rank range.

Task # 3: University suggestion based on user input

Ranking Range Top Bottom

Type

Region

Recommendation

Based on your input these universities you can prefer for higher education

University	The Best Year of Rank	The Best Rank	The Most Recent Year	Rank of The Most Recent Year
No content in table				

3. Invalid input for the rank range

Task # 3: University suggestion based on user input

Ranking Range Top Bottom

Type

Region

Results have been successfully shown!

Recommendation

Based on your input these universities you can prefer for higher education

University	The Best Year of Rank	The Best Rank	The Most Recent Year	Rank of The Most Recent Year
Massachusetts Institute of Technology (MIT)	2022	1	2022	1
Stanford University	2021	2	2022	3
University of Oxford	2022	2	2022	2
Harvard University	2021	3	2022	5
University of Cambridge	2022	3	2022	3
California Institute of Technology (Caltech)	2021	4	2022	6
ETH Zurich - Swiss Federal Institute of Technol...	2021	6	2022	8
Imperial College London	2022	7	2022	7
UCL	2018	7	2022	8
University of Chicago	2021	9	2022	10
Nanyang Technological University, Singapore ...	2020	11	2022	12
National University of Singapore (NUS)	2022	11	2022	11

4. Only specified rank range.

Task # 3: University suggestion based on user input

Ranking Range Top Bottom

Type

Region

Results have been successfully shown!

Recommendation

Based on your input these universities you can prefer for higher education

University	The Best Year of Rank	The Best Rank	The Most Recent Year	Rank of The Most Recent Year
University of Oxford	2022	2	2022	2
University of Cambridge	2022	3	2022	3
ETH Zurich - Swiss Federal Institute of Technol...	2021	6	2022	8
Imperial College London	2022	7	2022	7
UCL	2018	7	2022	8
Nanyang Technological University, Singapore ...	2020	11	2022	12
National University of Singapore (NUS)	2022	11	2022	11
EPFL	2018	12	2022	14
Tsinghua University	2021	15	2022	17
The University of Edinburgh	2022	16	2022	16
Peking University	2022	18	2022	18
The Australian National University	2018	20	2022	27

5. Choose a type with specified rank range.

Task # 3: University suggestion based on user input

Ranking Range Top Bottom

Type

Region

Country

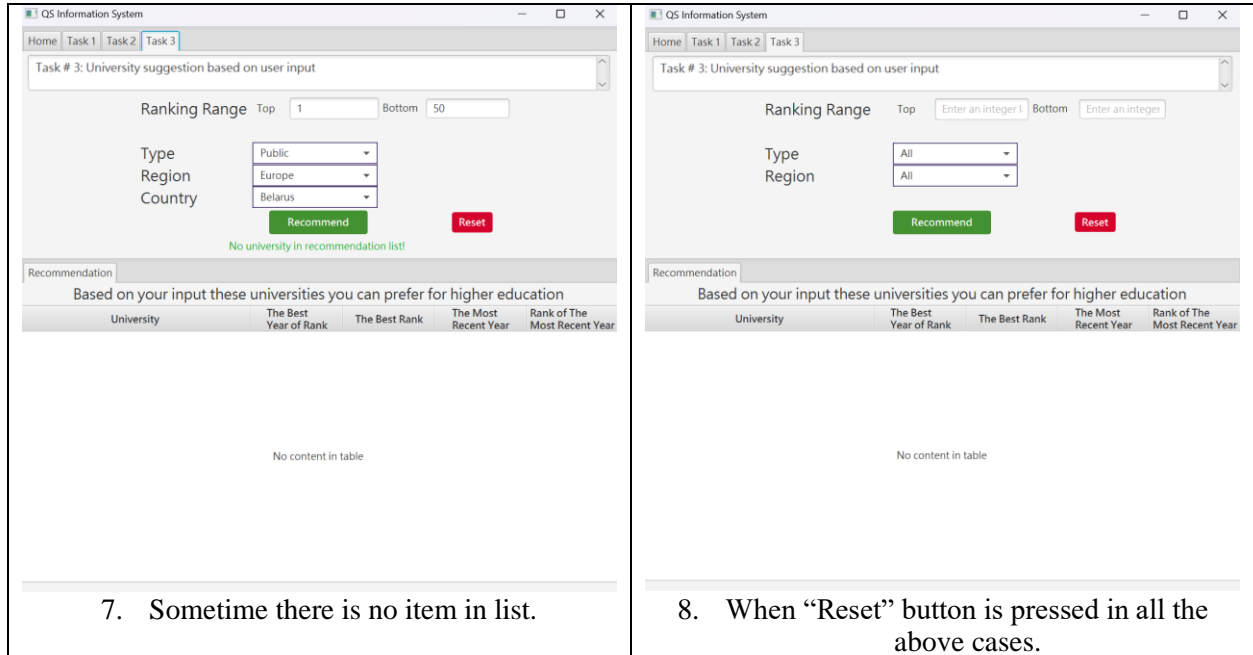
Results have been successfully shown!

Recommendation

Based on your input these universities you can prefer for higher education

University	The Best Year of Rank	The Best Rank	The Most Recent Year	Rank of The Most Recent Year
The University of Hong Kong	2022	22	2022	22
The Hong Kong University of Science and Tec...	2021	27	2022	34
The Chinese University of Hong Kong (CUHK)	2022	39	2022	39

6. Choose a type, a region, and a city with specified rank range.



Unit testing for implemented tasks



Coverage test

Element	Class, %	Method, %	Line, %	Branch, %
comp3111.qsproject	88% (8/9)	81% (45/55)	76% (379/493)	67% (128/190)
Application	0% (0/1)	0% (0/2)	0% (0/6)	100% (0/0)
Controller	100% (1/1)	27% (3/11)	48% (88/183)	35% (14/40)
QSite	100% (1/1)	100% (15/15)	94% (35/37)	50% (3/6)
QSLTest	100% (1/1)	100% (3/3)	95% (39/41)	100% (6/6)
RecommendItem	100% (1/1)	100% (8/8)	89% (17/19)	62% (5/8)
T1Analysis	100% (1/1)	100% (4/4)	89% (49/55)	78% (33/42)
T3Analysis	100% (1/1)	100% (2/2)	100% (22/22)	70% (17/24)
T21Analysis	100% (1/1)	100% (5/5)	98% (64/65)	73% (22/30)
T22Analysis	100% (1/1)	100% (5/5)	100% (65/65)	82% (28/34)