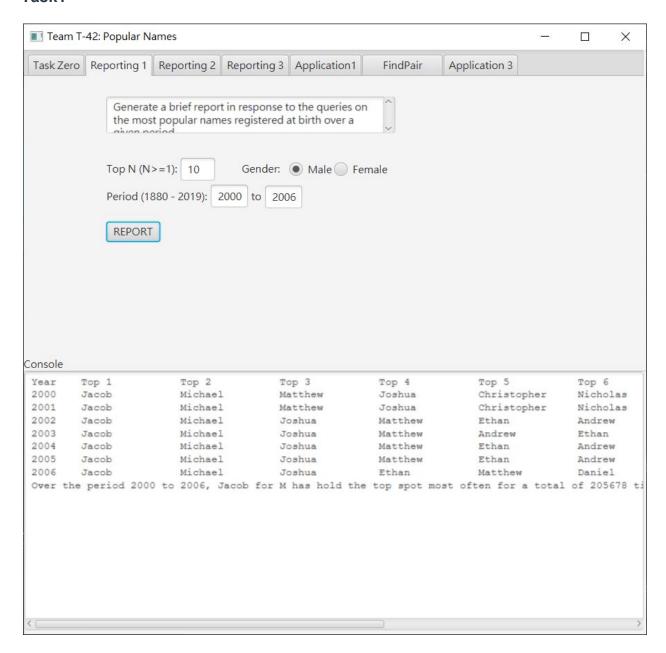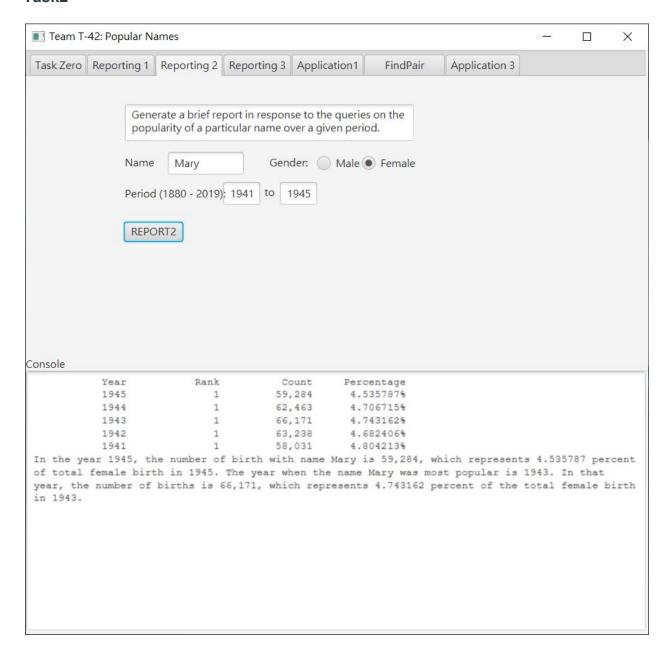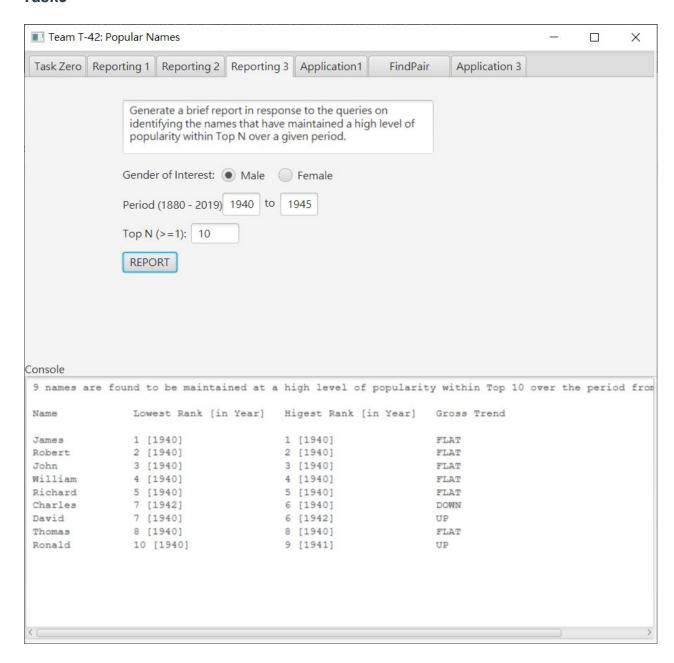# COMP 3111: Introduction to Software Engineering
Screenshots of the execution of the application showing sample inputs and outputs of your choice (Data-Reporting Task)

Task1

| Team T-42: Popular Names | — □ ✕ |

| Task Zero | Reporting 1 | Reporting 2 | Reporting 3 | Application1 | FindPair | Application 3 |

Generate a brief report in response to the queries on the most popular names registered at birth over a given period

Top N (N>=1): 10   Gender: ● Male ○ Female

Period (1880 - 2019): 2000 to 2006

REPORT

Console

Year	Top 1	Top 2	Top 3	Top 4	Top 5	Top 6
2000	Jacob	Michael	Matthew	Joshua	Christopher	Nicholas
2001	Jacob	Michael	Matthew	Joshua	Christopher	Nicholas
2002	Jacob	Michael	Joshua	Matthew	Ethan	Andrew
2003	Jacob	Michael	Joshua	Matthew	Andrew	Ethan
2004	Jacob	Michael	Joshua	Matthew	Ethan	Andrew
2005	Jacob	Michael	Joshua	Matthew	Ethan	Andrew
2006	Jacob	Michael	Joshua	Ethan	Matthew	Daniel

Over the period 2000 to 2006, Jacob for M has hold the top spot most often for a total of 205678 ti

Task2

Team T-42: Popular Names — □ ✕

| Task Zero | Reporting 1 | Reporting 2 | Reporting 3 | Application1 | FindPair | Application 3 |

Generate a brief report in response to the queries on the popularity of a particular name over a given period.

Name Mary   Gender: ◯ Male ◉ Female

Period (1880 - 2019): 1941 to 1945

REPORT2

Console

Year	Rank	Count	Percentage
1945	1	59,284	4.535787%
1944	1	62,463	4.706715%
1943	1	66,171	4.743162%
1942	1	63,238	4.682406%
1941	1	58,031	4.804213%

In the year 1945, the number of birth with name Mary is 59,284, which represents 4.535787 percent of total female birth in 1945. The year when the name Mary was most popular is 1943. In that year, the number of births is 66,171, which represents 4.743162 percent of the total female birth in 1943.

Task3

Team T-42: Popular Names   — ☐ ✕

| Task Zero | Reporting 1 | Reporting 2 | Reporting 3 | Application1 | FindPair | Application 3 |

Generate a brief report in response to the queries on identifying the names that have maintained a high level of popularity within Top N over a given period.

Gender of Interest: ● Male   ○ Female

Period (1880 - 2019) `1940` to `1945`

Top N (>=1): `10`

[REPORT]

Console

```
9 names are found to be maintained at a high level of popularity within Top 10 over the period from

Name            Lowest Rank [in Year]   Higest Rank [in Year]   Gross Trend

James           1 [1940]                1 [1940]                FLAT
Robert          2 [1940]                2 [1940]                FLAT
John            3 [1940]                3 [1940]                FLAT
William         4 [1940]                4 [1940]                FLAT
Richard         5 [1940]                5 [1940]                FLAT
Charles         7 [1942]                6 [1940]                DOWN
David           7 [1940]                6 [1942]                UP
Thomas          8 [1940]                8 [1940]                FLAT
Ronald          10 [1940]               9 [1941]                UP
```

Screenshots of the execution of the application showing sample inputs and outputs of your choice (Recommendation Task)

Task4

Team T-42: Popular Names

| Task Zero | Reporting 1 | Reporting 2 | Reporting 3 | Application1 | FindPair | Application 3 |

Develop and implement an online service using empirical data to help make informed decisions on naming their newborn babies. Sample Scenario of Application: (i) Parents seeking advices on naming their babies; (ii) A couple seeking advices on naming their pets

Dad Name: David   Mom Name: Mary

Dad Born Year (1880-2019): 1941   Mom Born Year (1880-2019): 1951

Vintage Year (1880-2019) (Optional):

Leave Vintage Year blank if no preference.

APPLICATION

Console

```
Recommended name for baby boy according to the NK-T4 Algorithm is Benjamin.
Recommended name for baby girl according to the NK-T4 Algorithm is Emma.
```

Task5

Team T-42: Popular Names — □ ×

| Task Zero | Reporting 1 | Reporting 2 | Reporting 3 | Application1 | FindPair | Application 3 |

This is an online service using empirical data to help make informed decisions on predicting names for compatible pairs. Let come to predict your future soulmate!!!

iName   Sean   iGenderMate: ● Male   ○ Female

iGender: ● Male ○ Female   iPreference: ● Younger ○ Older

iYOB: 1941

Find Pair

Console

The recommanded names for compatible pairs is Cleophus.

Task6

Team T-42: Popular Names ⬚ □ ✕

| Task Zero | Reporting 1 | Reporting 2 | Reporting 3 | Application1 | FindPair | Application 3 |

Prediction Score For Compatible Pairs

Enter the following data of you and another person to get a prediction score of love matching!

Your Name: Harper   Your Crush Name: Zoey

Your Year of Birth: 2014   Your Crush Gender: ◯ Male ◉ Female

Your Gender: ◯ Male ◉ Female

Preference: (Do you prefer a younger or older soulmate?)

◉ Younger   ◯ Older

Submit

Console

```
You score 46% for love matching!
(0%: Not Compatible; 100%: Perfect Match)
```

Report on the unit testing for the implemented tasks (100% pass)

Package comp3111.popnames

all > comp3111.popnames

116	0	0	3m4.81s
tests	failures	ignored	duration

100%
successful

Classes

Class	Tests	Failures	Ignored	Duration	Success rate
AnalyzeNamesTest	11	0	0	0.109s	100%
JavaFXTest	68	0	0	1m58.98s	100%
Task2Test	16	0	0	25.435s	100%
Task5Test	21	0	0	40.286s	100%

Generated by Gradle 6.3 at 2020年12月5日 下午10:08:11

Report on the coverage test (>65% branch coverage)

📓 PopNames3111 > ⊕ comp3111.popnames

comp3111.popnames

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed	Classes
⊙ Controller		91%		92%	17	119	23	329	3	17	0	1
⊙ AnalyzeNames		54%		88%	3	24	25	72	1	7	0	1
⊙ MyApplication	I	0%		n/a	3	3	11	11	3	3	1	1
⊙ Task5		91%		90%	3	25	2	48	0	3	0	1
⊙ Task2and5_Checker		98%		100%	1	24	1	49	1	9	0	1
⊙ Task2		100%		100%	0	20	0	61	0	8	0	1
Total	346 of 2,920	88%	24 of 336	92%	27	215	62	570	8	47	1	6

Documentation on the implemented tasks using JavaDoc

PACKAGE CLASS TREE DEPRECATED INDEX HELP

SEARCH: Search

Package comp3111.popnames

Class Summary

Class	Description
AnalyzeNames	
Controller	
MyApplication	The entry point of the entire program.
Task2	
Task2and5_Checker	
Task5	

PACKAGE CLASS TREE DEPRECATED INDEX HELP

Specification

Task4:

If the vintage year is not chosen, it should remain empty. NKT4 Algorithm follows the given one.(Rank equals 1 if the name is not ranked in the given year of birth.

Task 2:

If the name does not always exist over the period,for the corresponding years, the system shows the Rank as "Nil", Count as 0, Percentage as 0.

Task 5:

NKT5 Algorithm is modified as if the year is 2019 and if the preference is younger will send an error message as the dataset is up to 2019, we cannot predict the younger soulmate.And if the year is 1880 and if the prefer is older will send error message as dataset is down to 1880, we cannot predict the older soulmate.

Task 3:

(y1 == y2) is considered an invalid set of input because there is no meaningful trend to study if the user only provides a period of one year.

Task 6:

The NKT6 algorithm is modified. The original one would give negative results if oRank is much less than oRankMate. Therefore, the denominator in the equation of calculating oScore is changed from oRank to max(oRank, oRankMate).