

# COMP3111 T-22 Activity 2 – Source Code

To view all the raw files:

<https://github.com/Zhang-JK/COMP3111-T22/tree/master/doc>

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## People:

ZHANG Jiekai ([jzhanger@connect.ust.hk](mailto:jzhanger@connect.ust.hk)), Assigned Task: #1 #4

CHENG Yiren ([yrycheng.dylan@gmail.com](mailto:yrycheng.dylan@gmail.com)), Assigned Task: #3 #6

LIANG Houdong ([hliangam@connect.ust.hk](mailto:hliangam@connect.ust.hk)), Assigned Task: #2 #5

## GitHub Repo:

<https://github.com/Zhang-JK/COMP3111-T22>

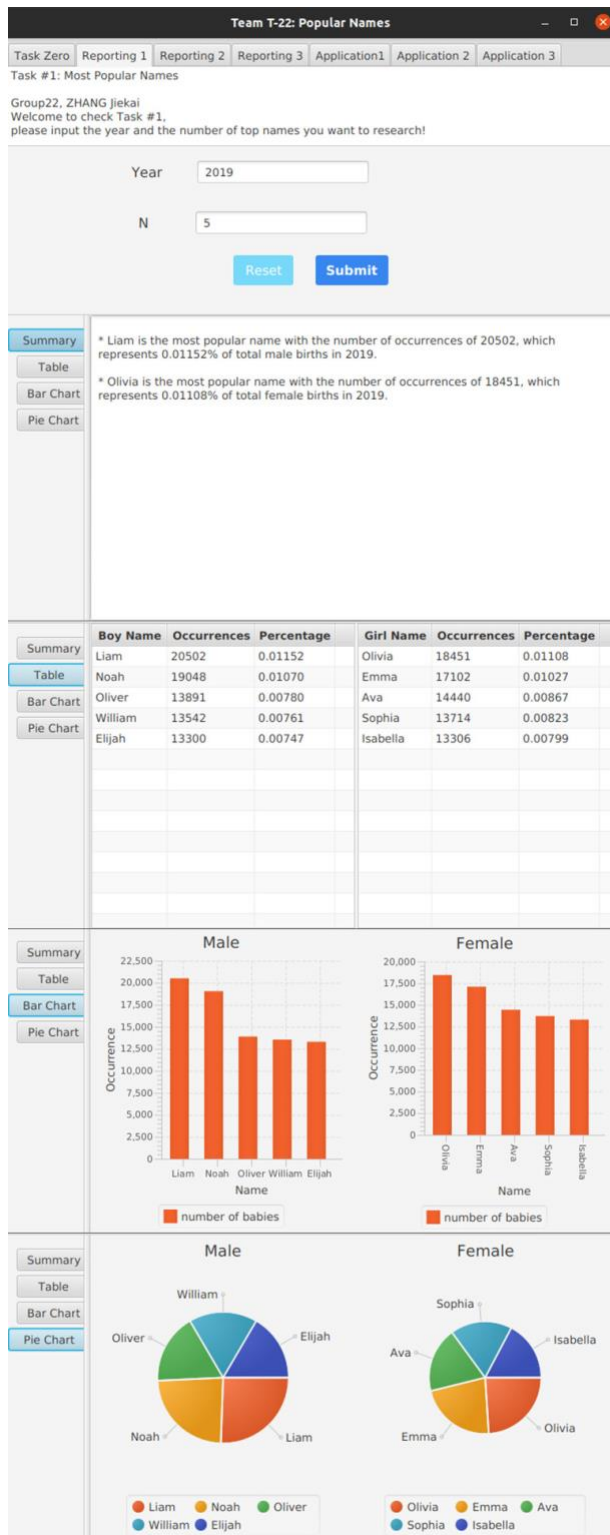
ZHANG Jiekai's branch: [JK\\_dev](#)

CHENG Yiren's branch: [dylan\\_branch](#)

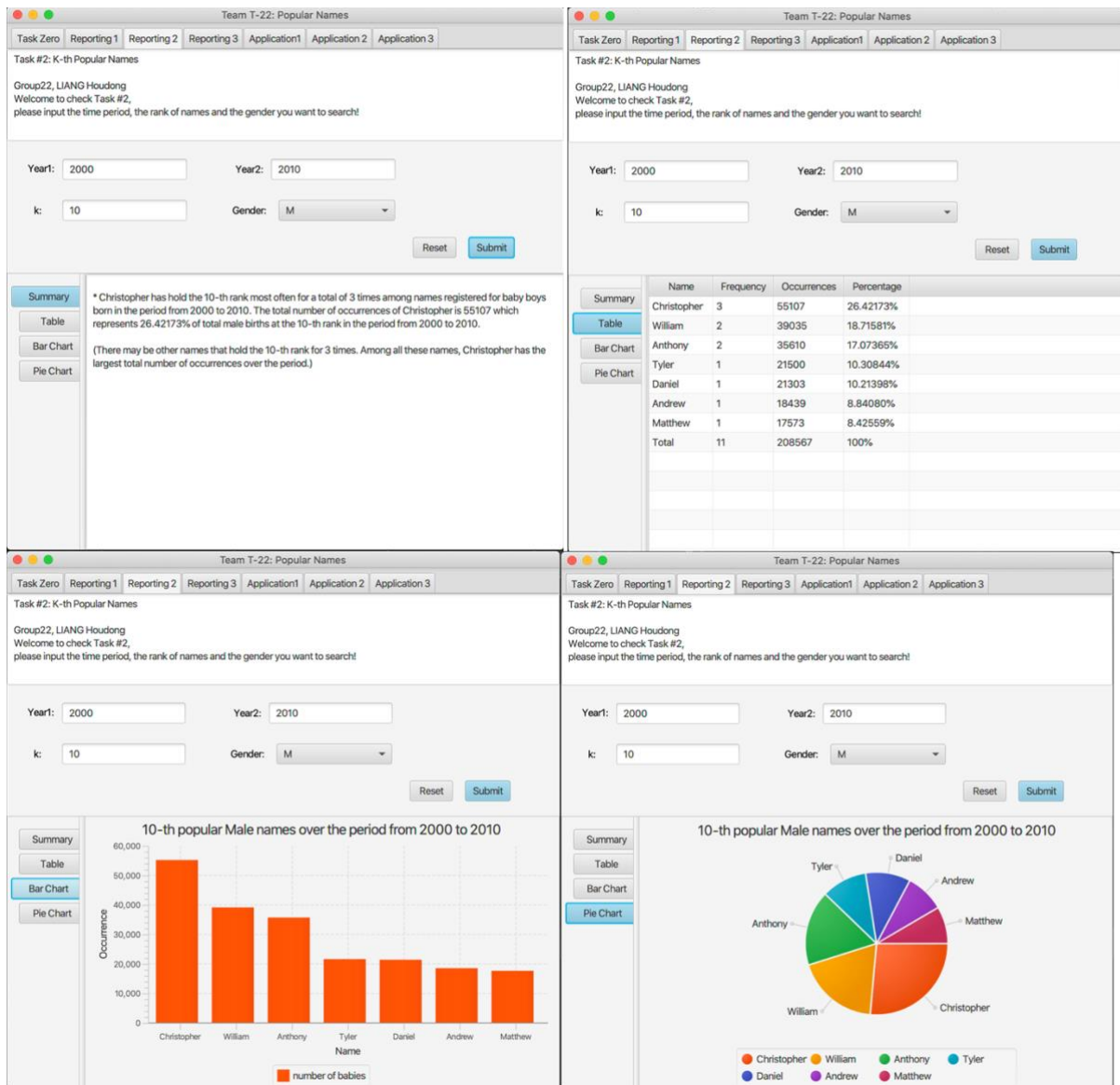
LIANG Houdong's branch: [dong\\_](#)

# Screenshots of the execution of the application showing sample inputs and outputs (Data-Reporting Task)

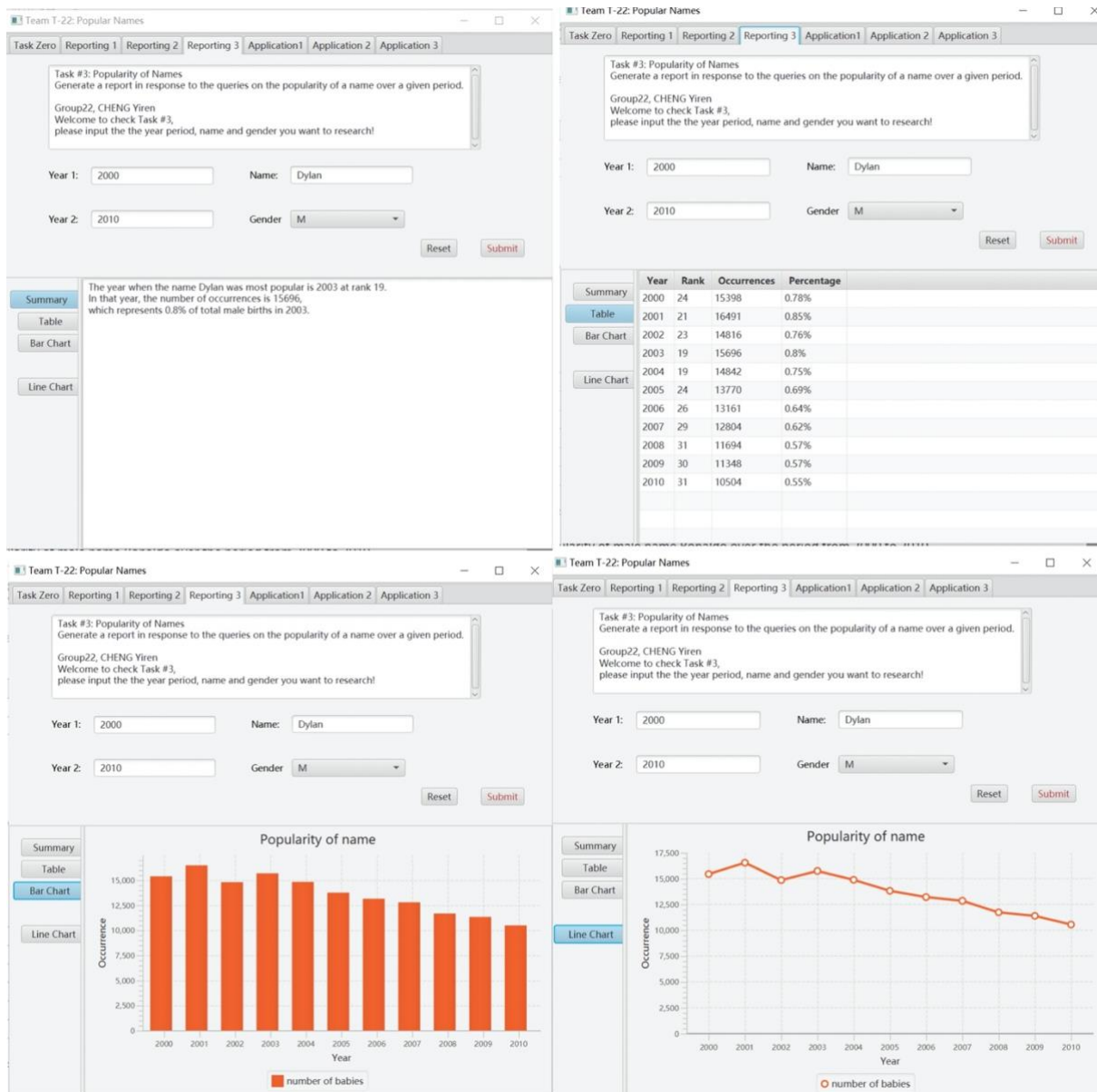
## Task1:



# Task2



## Task3



**Screenshots of the execution of the application showing sample inputs and outputs (Evidence-Based Recommendation Task)**

# Task4

## Algorithm T4X1

Team T-22: Popular Names

Task Zero

Reporting 1

Reporting 2

Reporting 3

Application 1

Application 2

Application 3

Task #4: Recommendation on Names for Newborn Babies

Group22, ZHANG Jiekai  
Welcome to check Task #4,  
please input the following information and we will recommend a name for both boy and girl based on that.

Dad's name

Dad's birth year

Mom's name

Mom's birth year

Algorithm

T4X1

Reset

Submit

Summary

Table

Bar Chart

Pie Chart

\* The Recommend Name for Boy is Liam.

\* The Recommend Name for Girl is Jennifer.

How it works?

We used our data base to find a popular name at the year of parents' birth.

- Boy's name is from the most popular boy name at dad's year of birth.
- Girl's name is from the most popular girl name at mom's year of birth.

(You can also view other recommended names and their relationship on Chart pages)

Hope you enjoy it and why not try once more with another algorithm ;)

Summary

Table

Bar Chart

Pie Chart

Boy Name	Occurrences	Percentage	Girl Name	Occurrences	Percentage
Liam	20502	0.01152	Jennifer	50559	0.03004
Noah	19048	0.01070	Jessica	45849	0.02724
Oliver	13891	0.00780	Ashley	38758	0.02303
William	13542	0.00761	Amanda	33905	0.02015
Elijah	13300	0.00747	Sarah	25874	0.01537
James	13087	0.00735	Stephanie	23018	0.01368
Benjamin	12942	0.00727	Nicole	22264	0.01323
Lucas	12412	0.00697	Melissa	21886	0.01300

Summary

Table

Bar Chart

Pie Chart

Boy's most popular names

Girl's most popular names

Bar Chart

Pie Chart

Boy's most popular names

Girl's most popular names

Pie Chart

Liam

Noah

Oliver

William

Elijah

James

Benjamin

Lucas

Jennifer

Jessica

Ashley

Amanda

Sarah

Stephanie

Nicole

Melissa

Liam

Noah

Oliver

William

Elijah

James

Benjamin

Lucas

Jennifer

Jessica

Ashley

Amanda

Sarah

Stephanie

Nicole

Melissa

Liam

Noah

Oliver

William

Elijah

James

Jennifer

Jessica

Ashley

Amanda

Sarah

Stephanie

### Algorithm T4X2

Team T-22: Popular Names

Task Zero	Reporting 1	Reporting 2	Reporting 3	Application1	Application 2	Application 3
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**Task #4: Recommendation on Names for Newborn Babies**

Group22, ZHANG Jiekai  
Welcome to check Task #4,  
please input the following information and we will recommend a name for both boy and girl based on that.

Dad's name

Dad's birth year

Mom's name

Mom's birth year

Algorithm T4X2 ▾    Type of name Popular ▾
Reset
Submit

---

Summary

\* The Recommend Name for Boy is Sterling.

\* The Recommend Name for Girl is Gladys.

How it works?

We find a name that begin and end with the first letter of parents' name.  
For popular, we will select the top names.  
And for unique we will select a not common name.

- Boy's name is selected from dad's birth year.
  - It begins with dad name's first letter and ends with mom name's first letter.
- Girl's name is selected from mom's birth year.
  - It begins with mom name's first letter and ends with dad name's first letter.
- If the name do not exists
  - We will only select the name begin with the first letter in parents' name.  
(You can also view other recommended names and their relationship on Chart pages)  
(They will tell you how popular or unique the name is.)

Hope you enjoy it and why not try once more with another algorithm :)

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Summary

Boy Name	Occurrences	Percentage
Sterling	746	0.00042
Stirling	17	0.00001
Sang	7	0.00000
Suyog	7	0.00000
Starling	5	0.00000

Girl Name	Occurrences	Percentage
Gladys	227	0.00013
Genesis	61	0.00004
Gladis	23	0.00001
Glynnis	10	0.00001
Glennis	9	0.00001
Glenys	5	0.00000

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Summary

**Boy's names**

**Girl's names**

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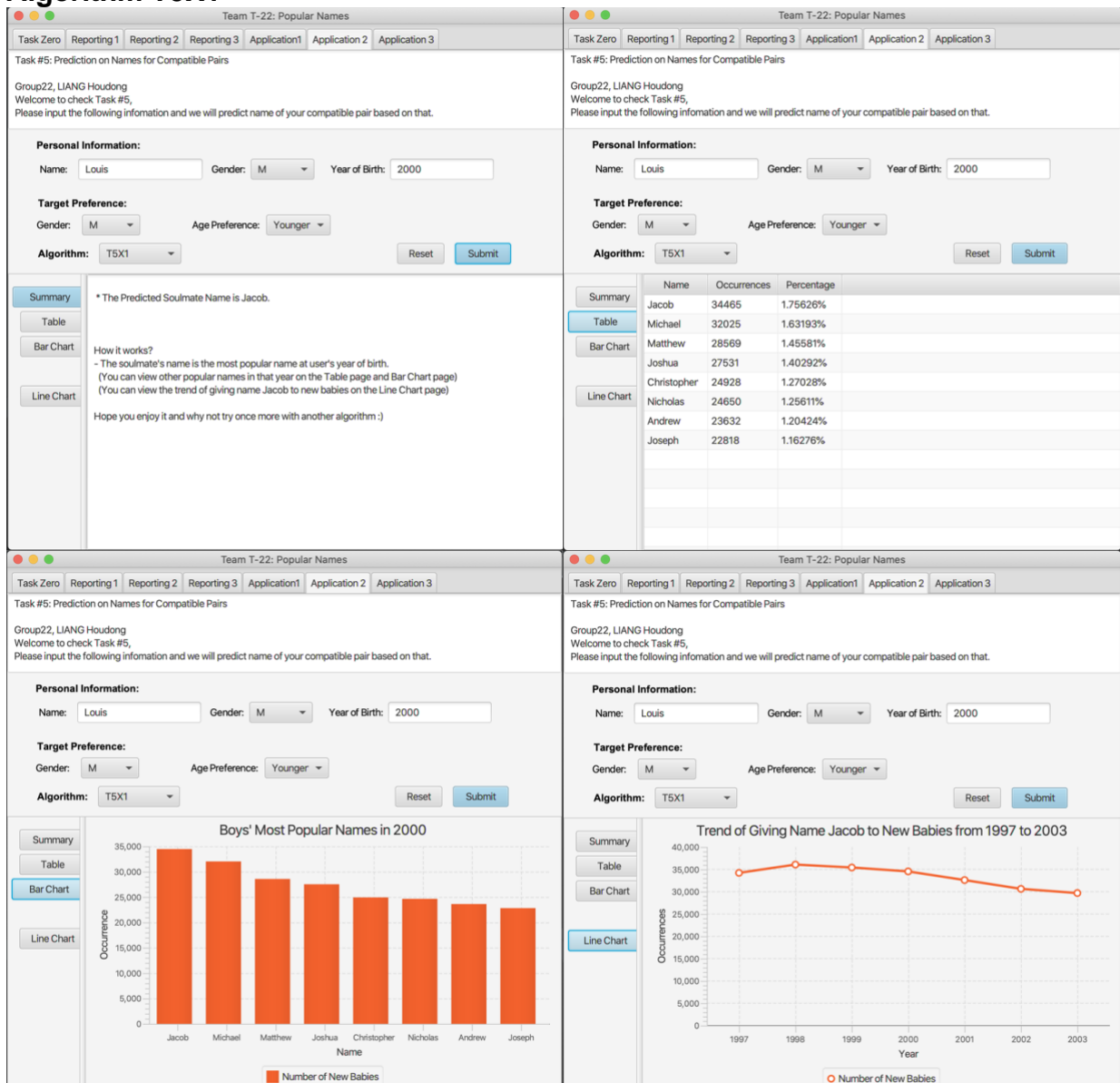
Summary

**Boy's names**

**Girl's names**

# Task5

## Algorithm T5X1





# Algorithm T5X2

Team T-22: Popular Names

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

Task #5: Prediction on Names for Compatible Pairs

Group22, LIANG Houdong  
Welcome to check Task #5,  
Please input the following information and we will predict name of your compatible pair based on that.

Personal Information:

Name:  Gender:  Year of Birth:

Target Preference:

Gender:  Age Preference:

Algorithm:  The algorithm takes about 30s, please wait patiently

Summary

Table

Bar Chart

\* The Predicted Soulmate Name is Jimmy.  
The Compatible score of Jimmy is 85.75000(out of 100).

How it works?  
- We calculate compatible score between user's name and other names. The predicted soulmate name is the name that gets the highest compatible score.  
-- How is the compatible score computed?  
Compatible score = (length score) \* (average popularity score during period P)  
Length score: if two names have a smaller length difference, then the length score is higher  
length score = 1 if length difference = 0  
length score = 0.7 if length difference = 1  
length score = 0.5 if length difference = 2  
length score = 0.2 if length difference = 3  
length score = 0.0 if length difference > 3  
Popularity score: if two names have a smaller rank difference, which means they are similarly popular, then

Team T-22: Popular Names

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

Task #5: Prediction on Names for Compatible Pairs

Group22, LIANG Houdong  
Welcome to check Task #5,  
Please input the following information and we will predict name of your compatible pair based on that.

Personal Information:

Name:  Gender:  Year of Birth:

Target Preference:

Gender:  Age Preference:

Algorithm:  The algorithm takes about 30s, please wait patiently

Summary

Table

Bar Chart

Name	Compatible Score	Length Score	Average Popularity Score
Jimmy	85.75000	1.0	85.75000
Albert	57.98864	0.7	82.84091
Larry	57.04545	1.0	57.04545
Ricky	55.75000	1.0	55.75000
Colby	50.38636	1.0	50.38636
Danny	49.79545	1.0	49.79545
Julio	48.11364	1.0	48.11364
Randy	43.75000	1.0	43.75000
Jaime	41.09091	1.0	41.09091
Marc	39.05682	0.7	55.79545

Team T-22: Popular Names

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

Task #5: Prediction on Names for Compatible Pairs

Group22, LIANG Houdong  
Welcome to check Task #5,  
Please input the following information and we will predict name of your compatible pair based on that.

Personal Information:

Name:  Gender:  Year of Birth:

Target Preference:

Gender:  Age Preference:

Algorithm:  The algorithm takes about 30s, please wait patiently

Summary

Table

Bar Chart

Compatible Scores for Different Names

Name	Score
Jimmy	85.75
Albert	57.99
Larry	57.05
Ricky	55.75
Colby	50.39
Danny	49.80
Julio	48.11
Randy	43.75
Jaime	41.09
Marc	39.06



## Task6

### Algorithm T6X1 and T6X2

Team 1-22: Popular names

Task ZeroReporting 1Reporting 2Reporting 3Application1Application2Application3

Task #6: Prediction on Scores for Compatible Pairs  
Develop and implement an online service using empirical data to help make informed decisions on predicting scores for compatible pairs.

**Personal Information**  
Name: Year of birth: Gender:

**Target Information**  
Name: Gender: Age Preference:

**Algorithm**

Summary

You two's compatible pair score is 100%.  
How it works?  
We make prediction based on the name length.  
- If you tow's name length are the same, you get full score.  
- Otherwise it's zero.  
Hope you enjoy this game!

Team 1-22: Popular names

Task ZeroReporting 1Reporting 2Reporting 3Application1Application2Application3

Task #6: Prediction on Scores for Compatible Pairs  
Develop and implement an online service using empirical data to help make informed decisions on predicting scores for compatible pairs.

**Personal Information**  
Name: Year of birth: Gender:

**Target Information**  
Name: Gender: Age Preference:

**Algorithm**

Summary

The compatible score is 100%  
How it works?  
- If the target name is the top 100 popular name in at least one year of the year which is earlier or later than the user's year of birth (based on user's age preference),you get full score.  
- Otherwise you get zero.  
Hope you enjoy this game!

# Report on the unit testing for the implemented tasks

## Package comp3111.popnames

all > comp3111.popnames

36	0	0	2m18.02s	100%
tests	failures	ignored	duration	successful

### Classes

Class	Tests	Failures	Ignored	Duration	Success rate
<a href="#">AnalyzeNamesTest</a>	5	0	0	0.067s	100%
<a href="#">FileReaderTest</a>	16	0	0	0.238s	100%
<a href="#">JavaFXTest</a>	2	0	0	1.303s	100%
<a href="#">Task1andTask4Test</a>	5	0	0	18.696s	100%
<a href="#">Task2andTask5Test</a>	4	0	0	1m43.90s	100%
<a href="#">Task3AndTask6Test</a>	4	0	0	13.819s	100%

HTML File: <https://github.com/Zhang-JK/COMP3111-T22/tree/master/doc/reports/tests/test>

# Report on the coverage test

Coverage: Project [test] x			
93% classes, 79% lines covered in package 'comp3111'			
Element	Class, %	Method, %	Line, %
popnames	93% (14/15)	84% (128/151)	79% (1106/1394)

HTML File: <https://github.com/Zhang-JK/COMP3111-T22/tree/master/doc/jacocoHTML>

# Documentation on the implemented tasks using Javadoc

HTML File: <https://github.com/Zhang-JK/COMP3111-T22/tree/master/doc/javadoc>