

# **Extra Info** [Team34]

## **Screenshots of the execution of the application showing sample inputs and outputs of your choice**

### **Task1: TopNameforBirth**

**Case1:** When the user types a wrong number (situation that cannot convert to a integer), it will show “Please provide legal number!”.

The screenshot shows a web-based application window. At the top, there is a horizontal navigation bar with several tabs: Task Zero, Reporting 1, Reporting 2, Reporting 3, Application1, Application 2, and Application 3. Below the navigation bar is a large input form. The form contains a text area with the placeholder "Generate a brief report in response to the queries on the most popular names registered at birth over a given". Below this is a section for specifying "Top N (N>=1)" with a value of "3" in a text input field, and gender selection buttons for "Male" (which is checked) and "Female". Further down, there is a section for "Period (1880 - 2019)" with two input fields for "from" and "to", containing "1880" and "2019" respectively. A "REPORT" button is located below these fields. At the bottom of the application window, there is a "Console" log area which displays the error message "Please provide legal number!" in red text. The overall interface has a clean, modern design with a light gray background and white input fields.

**Case2:** When the user type a wrong TopN (situation that it is smaller than 1 or larger than the smallest of the number of distinct names of that period), it will show “The parameter Top N is illegal (<1 or > the number of total distinct names in the period), please type again!”.

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

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

\* Top N (N>=1):  Gender:  Male  Female

\* Period (1880 - 2019):  to

**REPORT**

\* : must filled

Console

The parameter Top N is illegal(<1 or > the number of total distinct names in the period), please type again!

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

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

\* Top N (N>=1):  Gender:  Male  Female

\* Period (1880 - 2019):  to

**REPORT**

\* : must filled

Console

The parameter Top N is illegal(<1 or > the number of total distinct names in the period), please type again!

**Case3:** When the user types a wrong period (situation that year is out of bound or year2 larger than year1, it will show “the range is illegal, please type again!”).

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

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

\* Top N (N>=1):  Gender:  Male  Female

\* Period (1880 - 2019):  to

**REPORT**

\* : must filled

Console

the range is illegal, please type again!

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

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

\* Top N (N>=1):  Gender:  Male  Female

\* Period (1880 - 2019):  to

**REPORT**

\*: must filled

Console

the range is illegal, please type again!

**Case4:** When the user types correct input, it will show a short conclusion and the table.

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

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

\* Top N (N>=1):  Gender:  Male  Female

\* Period (1880 - 2019):  to

**REPORT**

\*: must filled

Console

Over the period 1941 to 1945, the name "James" for male has hold the top spot most often for a total of 5 times.

YEAR	Rank1	Rank2	Rank3	Rank4	Rank5
1941	James	Robert	John	William	Richard
1942	James	Robert	John	William	Richard
1943	James	Robert	John	William	Richard
1944	James	Robert	John	William	Richard
1945	James	Robert	John	William	Richard

## Task2:Popularity of Name

Case1: When the inputs are correct

Team T-34: Popular Names

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

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

Name:  Gender:  Male  Female

Period (1880 - 2019):  to

Console

```
In the year 1945, the number of birth with name " David " is 37,093, which represents 2.756594 percent of total M births in 1945. The year when the name "David" was most popular in 1945. In that year, the number of birth is 37,093, which represents 2.756594 percent of total M births in 1945.
```

Year	Rank	Count	Percentage
1941	7	30551	2.487986
1942	6	35892	2.599412
1943	6	37237	2.609742
1944	6	37374	2.742935
1945	6	37093	2.756594

Case2: When we have empty or not exist name as name input.

Team T-34: Popular Names

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

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

Name:  Gender:  Male  Female

Period (1880 - 2019):  to

Console

```
In the year 2019, the number of birth with name " " is 0, which represents 0.000000 percent of total M births in 2019. The year when the name " " was most popular in 2019. In that year, the number of birth is 0, which represents 0.000000 percent of total M births in 2019.
```

Year	Rank	Count	Percentage
2015	-1	0	0.000000
2016	-1	0	0.000000
2017	-1	0	0.000000
2018	-1	0	0.000000
2019	-1	0	0.000000

**Team T-34: Popular Names**

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

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

Name: abc Gender:  Male  Female

Period (1880 - 2019): 2015 to 2019

**REPORT**

**Console**

```
In the year 2019, the number of birth with name "abc" is 0, which represents 0.000000 percent of total M births in 2019.
The year when the name "abc" was most popular in 2019. In that year, the number of birth is 0, which represents
0.000000 percent of total M births in 2019.
```

Year	Rank	Count	Percentage
2015	-1	0	0.000000
2016	-1	0	0.000000
2017	-1	0	0.000000
2018	-1	0	0.000000
2019	-1	0	0.000000

### Case3: When the input year is empty or not an integer

**Team T-34: Popular Names**

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

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

Name: David Gender:  Male  Female

Period (1880 - 2019): [ ] to 2019

**REPORT**

**Console**

```
Please provide time period
```

**Team T-34: Popular Names**

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

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

Name: David Gender:  Male  Female

Period (1880 - 2019): 1sqd to 4af

**REPORT**

**Console**

```
Please provide legal time input
```

#### Case4: When starting year is larger than the ending year

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

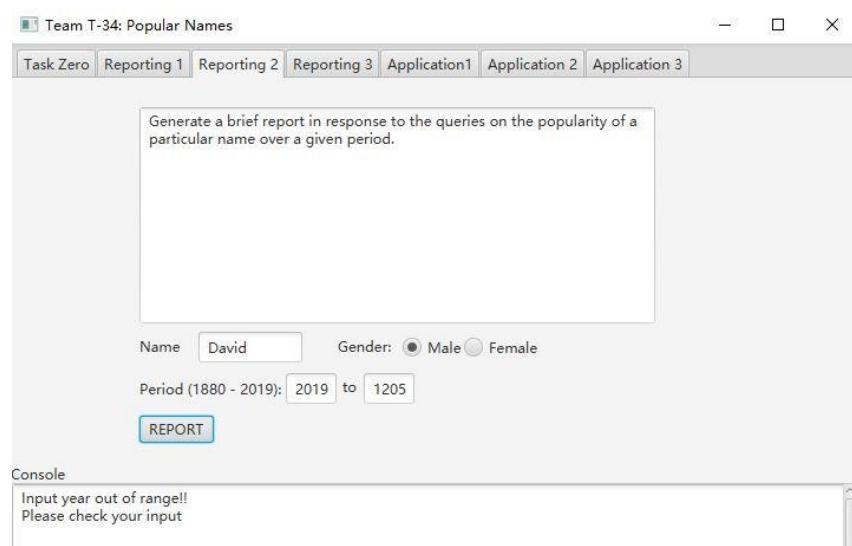
Generate a brief report in response to the queries on the popularity of a particular name over a given period.

Name:  Gender:  Male  Female

Period (1880 - 2019):  to

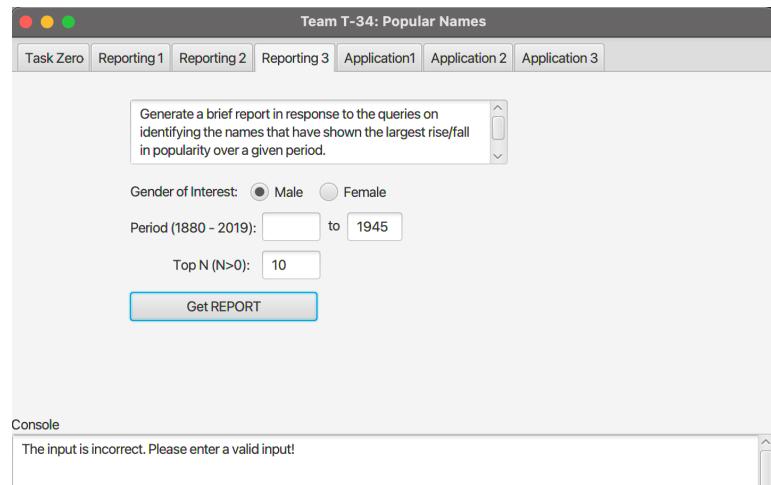
Console

Input year out of range!!  
Please check your input

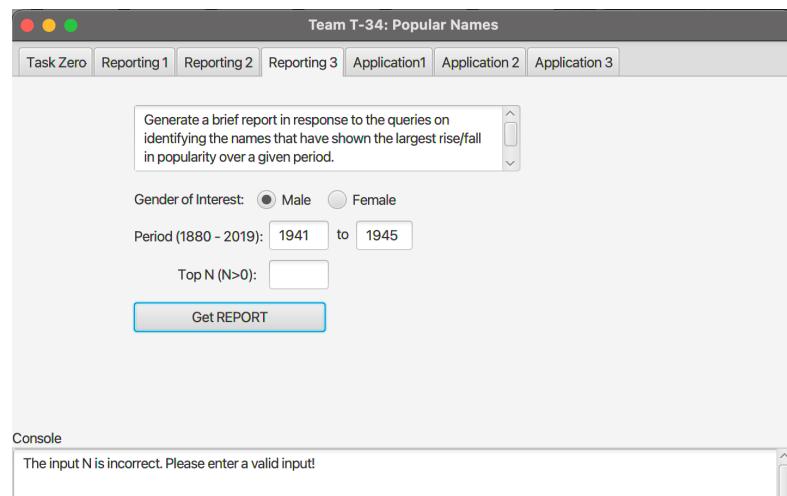


## Task3A: Trend in Popularity of Names (Simplified Task)

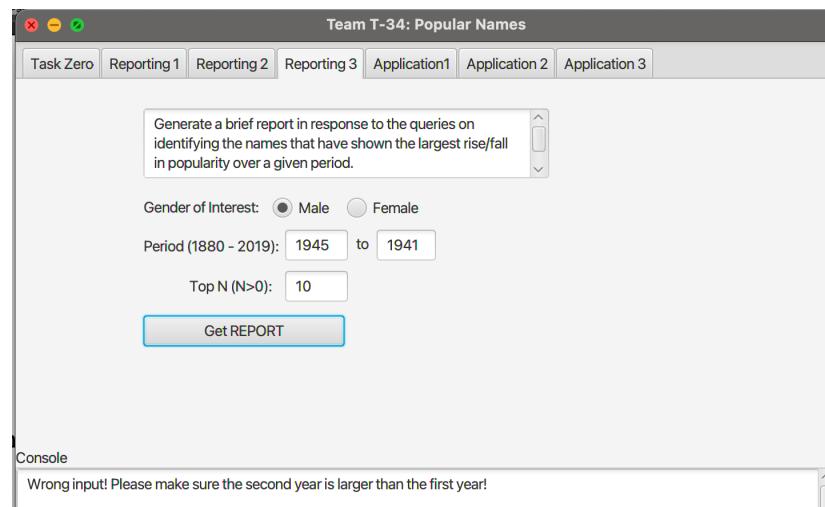
**Case1:** When the user input a wrong year (situation that year cannot converted into to an integer), the system will show “The input is incorrect. Please enter a valid input!”



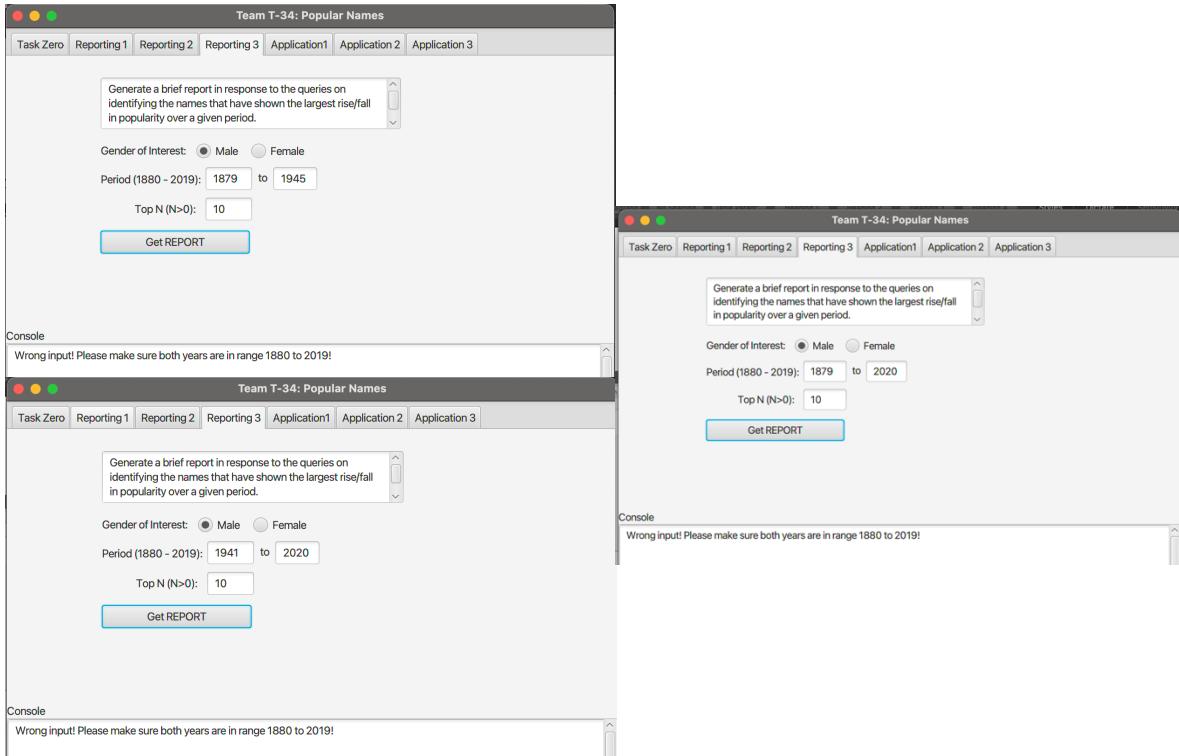
**Case2:** When the user input a wrong Top N (situation that N cannot be converted into an integer), the system will show “The input N is incorrect. Please enter a valid input!”



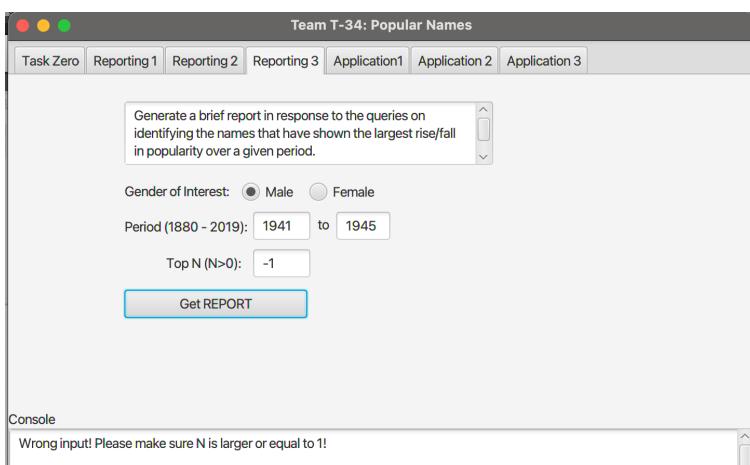
**Case3:** When the user input a larger year first, the system will show “Wrong input! Please make sure the second year is larger than the first year!”



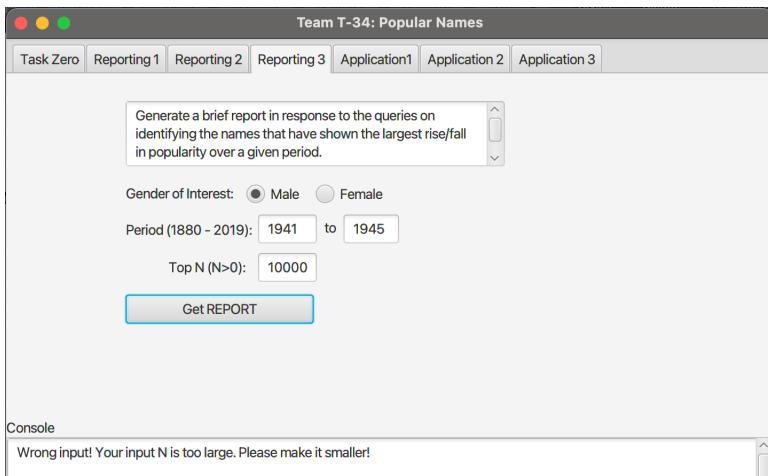
**Case4:** When the user input a wrong year (situation that either y1 or y2 or both are smaller than 1880 or larger than 2019), the system will show “Wrong input! Please make sure both years are in range 1880 to 2019!”



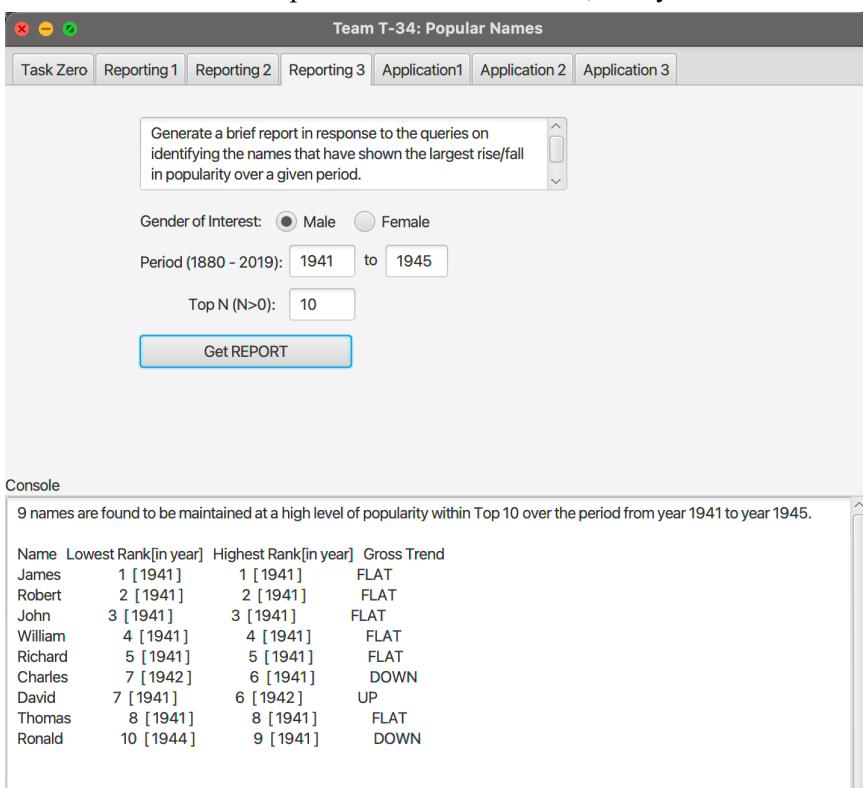
**Case5:** When the user input a wrong Top N (situation that N is smaller than 1), the system will show “Wrong input! Please make sure N is larger or equal to 1!”



**Case6:** When the user input a wrong Top N (situation that N is larger than the maximum number of distinct names in any year from y1 to y2), it will show “Wrong input! Your input N is too large. Please make it smaller!”



**Case7:** When all user inputs are correct and valid, the system will show a brief report and a table.



## Task4: NameRecommendation

**Case1:** When the user types correctly (can choose not to type in VintageYear and it will be automatically set to 2019) it will generate the recommended name for both gender, based on the algorithm given in task4 description from Canvas”.

The screenshot shows a Java Swing application window titled "NameRecommendation". The window has a tab bar at the top with tabs: Task Zero, Reporting 1, Reporting 2, Reporting 3, Application1, Application 2, and Application 3. The Application1 tab is selected.

The main panel contains the following components:

- A text box with the instruction: "Please type in the names and births of the parents and the vintage year for the baby, we will then recommend you the best names!"
- Input fields:
  - \* Dad's name: David
  - \* Mom's name: Mary
  - \* Dad's birth year (1880 - 2019): 2000
  - \* Mom's birth year (1880 - 2019): 1999
  - Vintage year (1880 - 2019): 2019
- A "GENERATE" button.
- A note below the input fields: "\* : must filled"

Below the main panel is a "Console" section with the following output:

```
The recommended name for baby boy is " Logan "
The recommended name for baby girl is " Aubrey "
```

**Case2:** When the user types wrong numbers, it will generate the warning that “Please provide legal number input and no spaces inside numbers is allowed!”.

Team T-00: Popular Names

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

Please type in the names and births of the parents and the vintage year for the baby, we will then recommend you the best names!

\* Dad's name  \* Mom's name

\* Dad's birth year  (1880 - 2019) \* Mom's birth year  (1880 - 2019)

Vintage year  (1880 - 2019)

**GENERATE**

**\*: must filled**

Console

Please provide legal number input and no spaces inside numbers is allowed!

**Case3:** When the user types white spaces in names, which is not allowed as I set, it will generate the warning that “You should not type any white space in the names and please ensure you have finished your input!”.

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

Please type in the names and births of the parents and the vintage year for the baby, we will then recommend you the best names!

\* Dad's name  \* Mom's name

\* Dad's birth year  (1880 - 2019) \* Mom's birth year  (1880 - 2019)

Vintage year  (1880 - 2019)

**GENERATE**

**\*: must filled**

Console

You should not type any white space in the names and please ensure you have finished your input!

**Case4:** When the user types an out-of-range number for Dad/Mom's birth year, it will generate the warning that “The year of Dad/Mom's birth is out of range! Please type a new one!”.

Team T-34: Popular Names

Task Zero Reporting 1 Reporting 2 Reporting 3 Application1 **Application2** Application 3

Please type in the names and births of the parents and the vintage year for the baby, we will then recommend you the best names!

\* Dad's name  \* Mom's name

\* Dad's birth year  (1880 - 2019) \* Mom's birth year  (1880 - 2019)

Vintage year  (1880 - 2019)

**GENERATE**

\* : must filled

Console

The year of Dad/Mom's birth is out of range! Please type a new one!

**Case5:** When the user types an out-of-range number for Vintage year, it will generate the warning that “The year of Vintage year is out of range! Please type a new one!”.

Team T-34: Popular Names

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

Please type in the names and births of the parents and the vintage year for the baby, we will then recommend you the best names!

\* Dad's name  \* Mom's name

\* Dad's birth year  (1880 - 2019) \* Mom's birth year  (1880 - 2019)

Vintage year  (1880 - 2019)

**GENERATE**

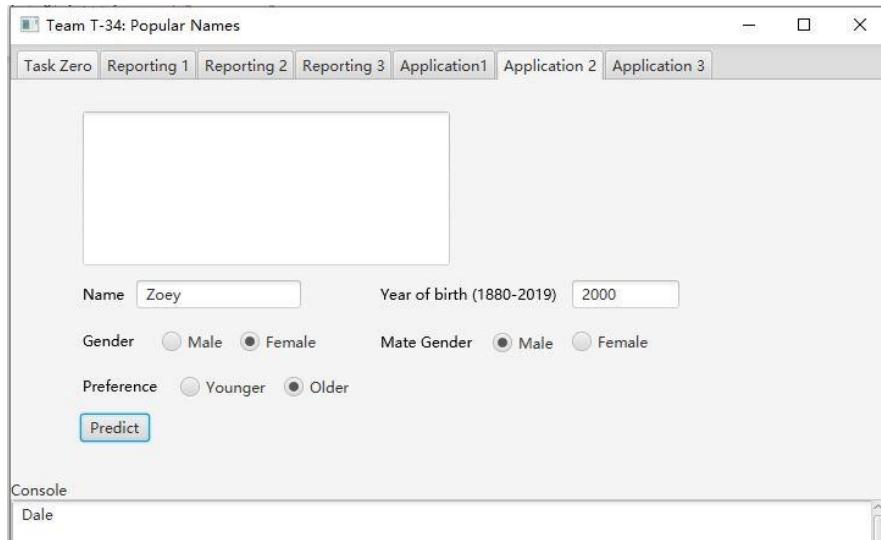
\* : must filled

Console

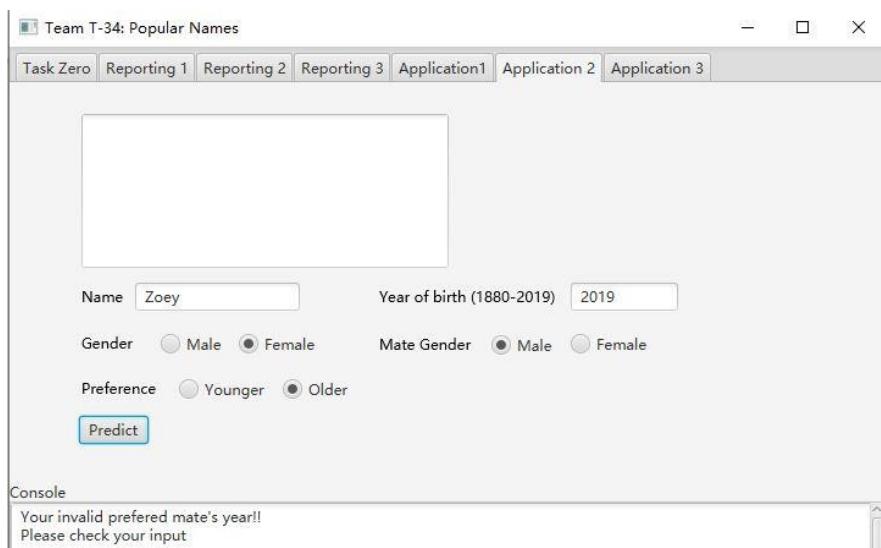
The year of Vintageyear is out of range! Please type a new one!

## Task5: Prediction on Names for Compatible Pairs

Case1: When all inputs are correct.



Case2: When your preferred mate's year of birth out of range.



### Case3: When the input name is empty or does not exist.

Team T-34: Popular Names

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

Name  Year of birth (1880-2019)

Gender  Male  Female Mate Gender  Male  Female

Preference  Younger  Older

**Predict**

Console

```
Jacob
```

Team T-34: Popular Names

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

Name  Year of birth (1880-2019)

Gender  Male  Female Mate Gender  Male  Female

Preference  Younger  Older

**Predict**

Console

```
Emily
```

### Case4: When input year is empty or not an integer.

Team T-34: Popular Names

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

Name  Year of birth (1880-2019)

Gender  Male  Female Mate Gender  Male  Female

Preference  Younger  Older

**Predict**

Console

```
Please provide your year of birth
```

Team T-34: Popular Names

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

Name: Zoey      Year of birth (1880-2019): 12.43213

Gender:  Male  Female      Mate Gender:  Male  Female

Preference:  Younger  Older

**Predict**

Console  
Please provide legal time input

**Case5:** When your name rank in your year of birth is larger than the total count of name in your preferred mate's year. (This can also be found in the test case)

Team T-34: Popular Names

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

Name: Zyrielle      Year of birth (1880-2019): 2015

Gender:  Male  Female      Mate Gender:  Male  Female

Preference:  Younger  Older

**Predict**

Console  
Emma

## Task6: Prediction on Scores for Compatible Pairs

**Case1:** When the user input a wrong year of birth (situation that year cannot converted into to an integer), the system will show “The input is incorrect. Please enter a valid input!”

The screenshot shows a window titled "Team T-34: Popular Names". The interface includes tabs at the top: Task Zero, Reporting 1, Reporting 2, Reporting 3, Application1, Application 2, and Application 3. The "Application1" tab is selected. Below the tabs, there are several input fields and radio buttons:

- Name:
- Gender:  Male  Female
- Year of Birth:
- Name of Mate:
- Gender of Mate:  Male  Female
- Preference:  Younger  Older

A blue "Get Score" button is located below the input fields. At the bottom, a "Console" section displays the message: "The input is incorrect. Please enter a valid input!"

**Case2:** When the user input a year of birth (year of birth >2019 or <1880), the system will show “Wrong input! Please make sure both years are in range 1880 to 2019!”

The screenshot shows two side-by-side windows of the "Team T-34: Popular Names" application. Both windows have the "Application1" tab selected.

**Left Window:**

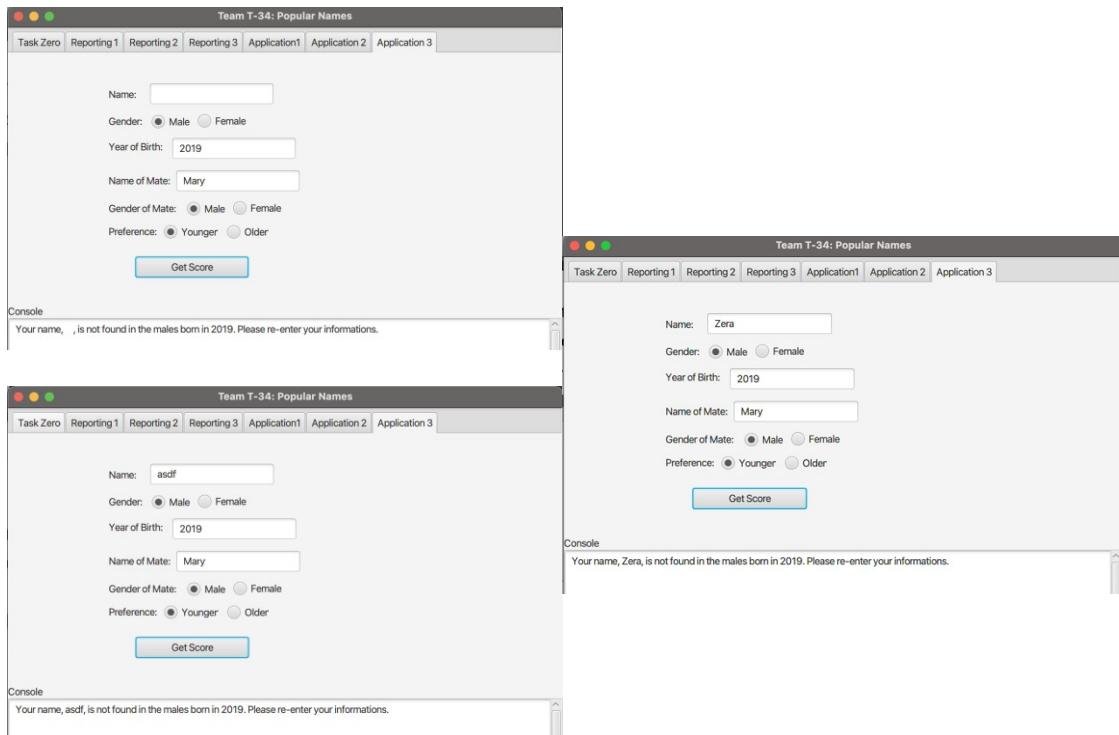
- Name:
- Gender:  Male  Female
- Year of Birth:
- Name of Mate:
- Gender of Mate:  Male  Female
- Preference:  Younger  Older

**Right Window:**

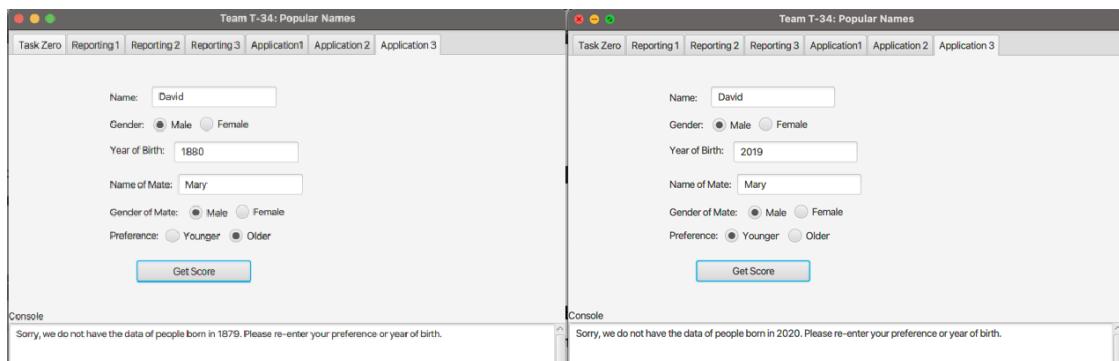
- Name:
- Gender:  Male  Female
- Year of Birth:
- Name of Mate:
- Gender of Mate:  Male  Female
- Preference:  Younger  Older

Both windows have a "Get Score" button. At the bottom of each window, a "Console" section displays the message: "Wrong input! Please make sure year of birth is in range 1880 to 2019!"

**Case3:** When the user inputs a name that is either invalid or not found to be born in input year of birth, the system will show “Your name, %iName, is not found in the %iGender born in %iYOB. Please re-enter your informations.”



**Case4:** When the user inputs year of birth 1880 and mate preference of older, or the user inputs year of birth 2019 and mate preference of younger, the system will show “Sorry, we do not have the data of people born in %(1879 or 2020). Please re-enter your preference of year of birth.”



**Case5:** When the user inputs a mate name which is invalid or not found to be born in the mate’s year of birth calculated according to input preference, the system will show “There is no %iGender with name %iNameMate that suits your preference of

%iPreference mates. Please re-enter your mate's informations.”

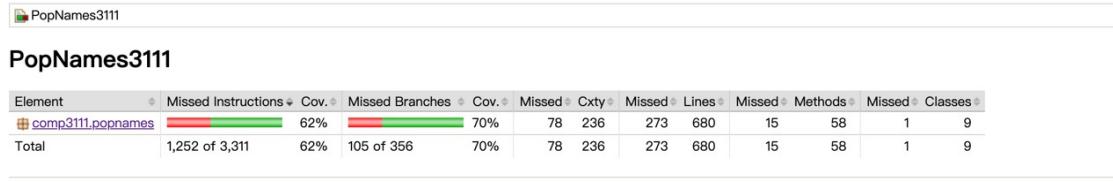
The image displays three separate windows of the "Team T-34: Popular Names" application. Each window has a title bar with tabs: Task Zero, Reporting 1, Reporting 2, Reporting 3, Application1, Application 2, and Application 3. The main interface includes fields for Name (text input), Gender (radio buttons for Male and Female), Year of Birth (text input), Name of Mate (text input), Gender of Mate (radio buttons for Male and Female), and Preference (radio buttons for Younger and Older). A "Get Score" button is located at the bottom left. Below the main form is a "Console" window containing error messages.

- Top Left Window:** Name: Tom, Gender: Male, Year of Birth: 2018, Name of Mate: asdf, Gender of Mate: Male, Preference: Younger. Console message: "There is no male with name asdf that suits your preference of younger mates. Please re-enter your mate's informations."
- Top Right Window:** Name: Tom, Gender: Male, Year of Birth: 2018, Name of Mate: Mary, Gender of Mate: Male, Preference: Younger. Console message: "There is no male with name Mary that suits your preference of younger mates. Please re-enter your mate's informations."
- Bottom Window:** Name: Tom, Gender: Male, Year of Birth: 2018, Name of Mate: , Gender of Mate: Male, Preference: Younger. Console message: "There is no male with name that suits your preference of younger mates. Please re-enter your mate's informations."

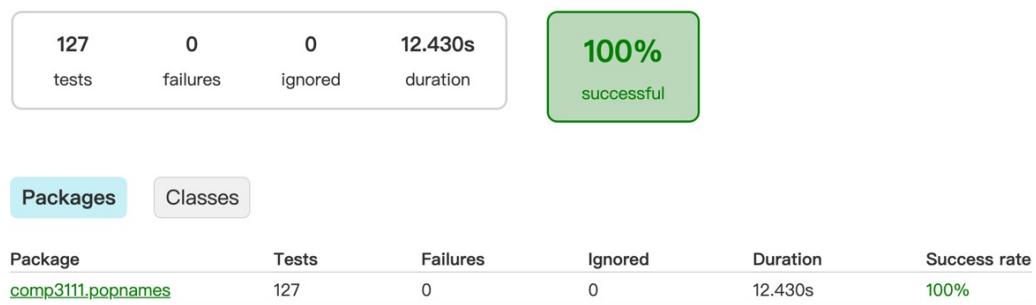
**Case6:** When all user inputs are correct and valid, the system will show a brief text indicating the compatibility score of you and your input mate.

A screenshot of the "Team T-34: Popular Names" application window. The user has entered the following information:  
Name: Tom  
Gender: Male  
Year of Birth: 2018  
Name of Mate: Mary  
Gender of Mate: Female  
Preference: Younger  
A "Get Score" button is visible at the bottom left. The "Console" window at the bottom right displays the message: "The compatibility of you, Tom, and your mate, Mary, is 87.41%."

# Jacoco and Test Summary:



## Test Summary



We do not add testcases for the controller so the total coverage is not that high.

# **Documentation on the implemented tasks using JavaDoc**

**Please check the file “Doc” inside the GitHub, thanks!**

## **Supplementary Notes:**

1. Task1: TopNamesforBirth:
  - a. Consider string with white spaces as illegal and will generate a message for users to retype.
  - b. When TopN is too large and larger than the available number of distinct names, we consider it as illegal and will generate a message for users to retype.
2. Task4: NameRecommendation:
  - a. Consider string with white spaces as illegal and will generate a message for users to retype.
3. Task5
  - a. The only hard constraint is the “Year”. With non-integer input or out of range input, the application will generate a warning message.
  - b. The application also checks the year of birth of your preferred mate. If your input year is 2019 with preference as younger or input year is 1880 with preference as older, the application will generate a warning message.
  - c. If your name rank is larger than the total number of name in your mate’s year, the application will give you the most popular name in your mate’s year.
4. Task6

Algorithm:

The algorithm used to generate the score is different from the one in the task description.

New algorithm:

Parameters: Input user name: s1  
Input\_mate\_name: s2  
Input\_user\_birth year: y1  
Input\_user\_preference: p1  
Input\_user gender: g1  
Input\_mate gender:g2  
Mate\_birth\_year: y2 (calculated by y1 and p1)  
User\_rank= rank of s1 in gender g1 of year y1  
Mate\_rank = rank of s2 in gender g2 of year y2  
People\_1 = unique people of gender g1 in year y1  
People\_2 = unique people of gender g2 in year y2

$$\text{Score} = (1.0 - | \text{User\_rank} - \text{Mate\_rank} | * 2 / (\text{people\_1} + \text{people\_2})) * 100\%$$

For the new algorithm, the score of compatibility will always be in range 0% to 100%. If the input name's rank and input name of birth's rank in their respective birth years, according to the preference selected, are close to each other, the score will be much closer to 100%. On the other hand, if the difference is large, the score will be much closer to 0%.