

## TEAM PREDICTOR SIMULATOR

Gui stays neat after been resized

The screenshot shows a Java Swing window titled "Team Season Predictor". The window is divided into two main sections: "SIMULATION OPTIONS" and "SIMULATION OUTPUT".

**SIMULATION OPTIONS:**

- Number of Player:
- Name of Player:
- Rank of Player:
- Number of Games in a Season:
- Insert Player details:
- Edit Player details:
- Show status:
- Open File:
- 
- 

**SIMULATION OUTPUT:**

*This is an editable JTextArea to OUTPUT MATCHES SIMULATION RESULTS*

The output area is a large, empty text box with a vertical scrollbar on the right side.

Gui after been resized

Team Season Predictor

SIMULATION OPTIONS

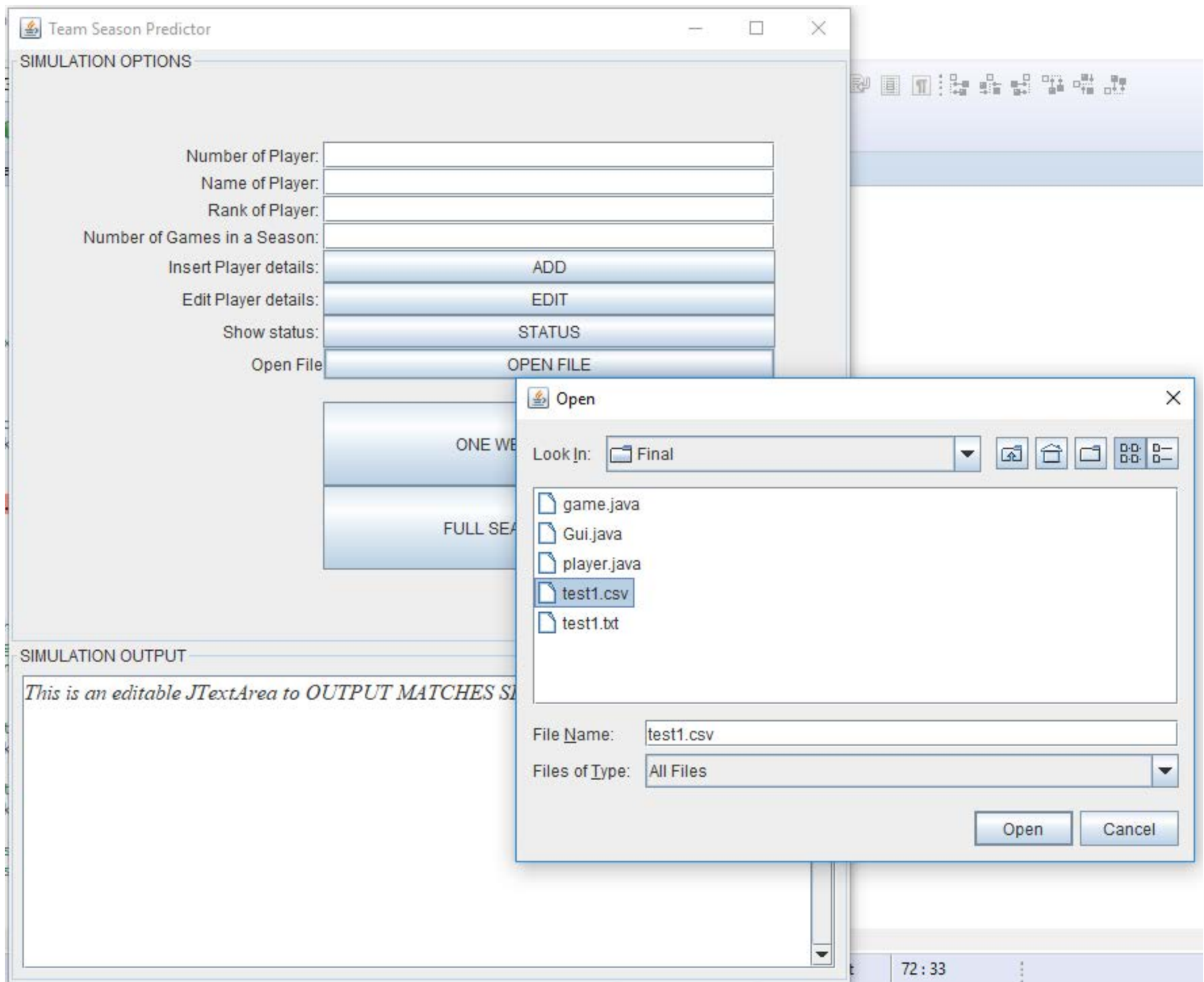
Number of Player:	
Name of Player:	
Rank of Player:	
Number of Games in a Season:	
Insert Player details:	ADD
Edit Player details:	EDIT
Show status:	STATUS
Open File	OPEN FILE

ONE WEEK SIMULATION
FULL SEASON SIMULATION

SIMULATION OUTPUT

*This is an editable JTextArea to OUTPUT MATCHES SIMULATION RESULTS*

We can open a file with 'Open file' button and insert data from either .csv or .txt file.  
If invalid data exists program skips to next line



We can add manually ( using 'Add button ' ) new tennis players . Max number of players to be accepted is 4096 ( as specified at requirements)

**Team Season Predictor**

**SIMULATION OPTIONS**

Number of Player: 1

Name of Player: Jason

Rank of Player: 2999

Number of Games in a Season: 4095

Insert Player details: **ADD**

Edit Player details: **EDIT**

Show status: **STATUS**

Open File: **OPEN FILE**

**ONE WEEK SIMULATION**

**FULL SEASON SIMULATION**

**SIMULATION OUTPUT**

*New Player added*

If invalid data gets entered message appears inside the textfields .

The screenshot shows a Java Swing window titled "Team Season Predictor". It contains two main panels: "SIMULATION OPTIONS" and "SIMULATION OUTPUT".

**SIMULATION OPTIONS Panel:**

- Number of Player: 87
- Name of Player: Kate
- Rank of Player: NOPE
- Number of Games in a Season: 4095
- Insert Player details: ADD
- Edit Player details: EDIT
- Show status: STATUS
- Open File: OPEN FILE
- ONE WEEK SIMULATION
- FULL SEASON SIMULATION

**SIMULATION OUTPUT Panel:**

*New Player added*

## SIMULATION OPTIONS

Number of Player: Should be an integer value , please try again

Name of Player: Should be a string value , please try again

Rank of Player: Should be an integer value , please try again

Number of Games in a Season: Should be an integer value , please try again

Insert Player details: ADD

Edit Player details: EDIT

Show status: STATUS

Open File: OPEN FILE

ONE WEEK SIMULATION

FULL SEASON SIMULATION

## SIMULATION OUTPUT

*New Player added*

We can manually override data , using the 'Edit button' . Based on the entered player name , the remaining information gets updated

Team Season Predictor

SIMULATION OPTIONS

Number of Player:1

Name of Player:Jason

Rank of Player:2998

Number of Games in a Season:4096

Insert Player details:ADD

Edit Player details:EDIT

Show status:STATUS

Open FileOPEN FILE

ONE WEEK SIMULATION

FULL SEASON SIMULATION

SIMULATION OUTPUT

Records updated

Application is able to simulate tennis match results weekly  
Match results are presented back to the user

Team Season Predictor

SIMULATION OPTIONS

Number of Player:

Name of Player:

Rank of Player:

Number of Games in a Season:

Insert Player details:

Edit Player details:

Show status:

Open File

SIMULATION OUTPUT

.....*WEEK 1*.....

*(Loss) James VS Jane (Win)*

*(Win) Jane VS Anna (Loss)*

*(Loss) Anna VS Tyron (Win)*

*(Win) Tyron VS Jake (Loss)*

*(Loss) Jake VS Harold (Win)*

*(Win) Harold VS Bob (Loss)*

*(Loss) Bob VS Cathreen (Win)*

*(Loss) Cathreen VS Iambel (Win)*

*(Win) Iambel VS Santiago (Loss)*



By clicking on '1 week simulation button' next weeks results gets calculated .  
Press the button until season ends

The screenshot shows a software window titled "Team Season Predictor". It is divided into two main sections: "SIMULATION OPTIONS" and "SIMULATION OUTPUT".

**SIMULATION OPTIONS:**

- Number of Player:
- Name of Player:
- Rank of Player:
- Number of Games in a Season:
- Insert Player details:
- Edit Player details:
- Show status:
- Open File:

Below these options are two large buttons:

- 
- 

**SIMULATION OUTPUT:**

The output area contains the text: *Season came to an end*

At any time user can view status of operations by clicking on 'Status button'. Details like the week the players are on, current standings, and skill levels at request are presented.

Standings before game starts

**Team Season Predictor**

**SIMULATION OPTIONS**

Number of Player:

Name of Player:

Rank of Player:

Number of Games in a Season:

Insert Player details:

Edit Player details:

Show status:

Open File:

**SIMULATION OUTPUT**

.....*WEEK 1*.....

*Player name: Jake , Rank: 2615.0, Wins: 0 , Losses: 0*

*Player name: Bob , Rank: 2438.0, Wins: 0 , Losses: 0*

*Player name: Cathreen , Rank: 2375.0, Wins: 0 , Losses: 0*

*Player name: Harold , Rank: 2125.0, Wins: 0 , Losses: 0*

*Player name: Santiago , Rank: 2111.0, Wins: 0 , Losses: 0*

*Player name: Tyron , Rank: 2095.0, Wins: 0 , Losses: 0*

*Player name: Anna , Rank: 2075.0, Wins: 0 , Losses: 0*

*Player name: James , Rank: 2055.0, Wins: 0 , Losses: 0*

*Player name: Jane , Rank: 2035.0, Wins: 0 , Losses: 0*

Standings during week10 ( sorted based on current skill level - ranking)

Team Season Predictor

SIMULATION OPTIONS

Number of Player:

Name of Player:

Rank of Player:

Number of Games in a Season:

Insert Player details:

ADD

Edit Player details:

EDIT

Show status:

STATUS

Open File

OPEN FILE

ONE WEEK SIMULATION

FULL SEASON SIMULATION

SIMULATION OUTPUT

.....WEEK 10.....

Player name: Tyron , Rank: 2147.4836, Wins: 6 , Losses: 3

Player name: Cathreen , Rank: 2136.7258, Wins: 2 , Losses: 7

Player name: Santiago , Rank: 2118.3325, Wins: 5 , Losses: 4

Player name: Jake , Rank: 2109.8694, Wins: 2 , Losses: 7

Player name: Harold , Rank: 2107.866, Wins: 4 , Losses: 5

Player name: Anna , Rank: 2085.3513, Wins: 5 , Losses: 4

Player name: Bob , Rank: 2076.7332, Wins: 1 , Losses: 8

Player name: Izambel , Rank: 2058.6426, Wins: 5 , Losses: 4

Player name: James . Rank: 2056.6763. Wins: 4 . Losses: 5

Also user can view only statistics for a specific tennis player by providing his/her name and clicking on 'Status button'

**Team Season Predictor**

**SIMULATION OPTIONS**

Number of Player:

Name of Player:

Rank of Player:

Number of Games in a Season:

Insert Player details:

Edit Player details:

Show status:

Open File

**SIMULATION OUTPUT**

.....*WEEK 10*.....

*Player name: Santiago , Rank: 2118.3325, Wins: 5 , Losses: 4*

Application is able to simulate tennis match results for the whole season

Match results are presented back to the user

Team Season Predictor

SIMULATION OPTIONS

Number of Player:

Name of Player:

Rank of Player:

Number of Games in a Season:

Insert Player details:

Edit Player details:

Show status:

Open File:

SIMULATION OUTPUT

.....

.....SEASON CAME TO AN END - RESULTS....

(Win) James VS Jane (Loss)

(Loss) Jane VS Anna (Win)

(Loss) Anna VS Tyron (Win)

(Loss) Tyron VS Jake (Win)

(Loss) Jake VS Harold (Win)

(Loss) Harold VS Bob (Win)

(Loss) Bob VS Cathreen (Win)

(Loss) Cathreen VS I-ambel (Win)

The program uses a variation of the ELO system to determine skill for tennis players in order to determine the final outcome of a game. We also add some randomness to consider some other factors influencing tennis matches (surface, motivation, injury condition). Victories and losses change the players' skill level based on the skill of the player they played against.