

# Ski Resort Simulator

## User Documentation



# TABLE OF CONTENTS

## CHAPTER 1:

OPERATIONS DESCRIPTION.....	2
-----------------------------	---

## CHAPTER 2:

BASIC OPERATIONS TUTORIAL.....	3
--------------------------------	---

EXAMPLE TUTORIAL 1.....	5
-------------------------	---

EXAMPLE TUTORIAL 2.....	7
-------------------------	---

## CHAPTER 3:

SAVING FILES OVERVIEW.....	9
----------------------------	---

SAVING FILES TUTORIAL.....	10
----------------------------	----

## CHAPTER 4:

GRAPHS DESCRIPTION.....	13
-------------------------	----

GRAPHS TUTORIAL.....	13
----------------------	----

## CHAPTER 5:

OUTPUTS OVERVIEW.....	14
-----------------------	----

## CHAPTER 6:

REFERENCE LIST.....	16
---------------------	----

## INDEX:

INDEX CONTENTS.....	19
---------------------	----

# CHAPTER 1:

## *Operations Description*

THIS USER DOCUMENTATION IS INTENDED FOR THE USER WHO MEANS TO USE THE SKI RESORT SIMULATOR SOFTWARE DISTRIBUTED WITH THIS PACKAGE. THE MANUAL WILL GIVE A THOROUGH EXPLANATION OF THE SOFTWARE SO THAT THE USER, NO MATTER WHO HE OR SHE IS, WILL BE ABLE TO USE THE SOFTWARE TO ITS FULLEST POTENTIAL. THEY WILL ALSO BE ABLE TO USE IT SO THAT THEY MAY USE THE SOFTWARE TO MOST EFFECTIVELY FIND THE RESULTS WHICH WILL HELP THEM TO HAVE A MORE ENJOYABLE SKI RESORT EXPERIENCE.

The Ski Resort Simulator is intended to be a powerful tool for both ski resort goers and owners. It will help everyone to have the most enjoyable

THE SKI RESORT SIMULATOR ALLOWS EITHER A SKI RESORT ATTENDEE OR OWNER TO SIMULATE A TYPICAL SEASON AT THEIR SKI RESORT. THEY CAN SET A NUMBER OF DIFFERENT INPUT FIELDS FOR THEIR SIMULATION AND SEE HOW THE SIMULATION REACTS TO THEIR DIFFERENT SCENARIOS. THIS MANUAL WILL SHOW YOU STEP-BY-STEP HOW TO ACCOMPLISH THE MOST BASIC TASKS THE SIMULATOR IS CAPABLE OF. LATER ON, WE WILL LEARN HOW POWERFUL THE SIMULATOR TRULY IS AND HOW IT CAN DEMONSTRATE COMPLEX SITUATIONS SO THAT ALL SITUATIONS MAY BE ACCOUNTED FOR. LET'S BEGIN BY LOOKING AT OUR FIRST TUTORIAL ON THE BASIC OPERATIONS OF THE SIMULATOR.



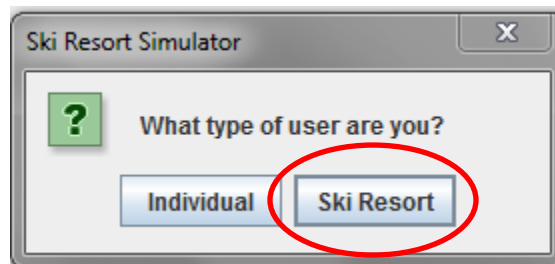
# CHAPTER 2:

## *Basic Operations Tutorial*

THE FOLLOWING TUTORIAL EXPLAINS THE BASIC USE OF THE SIMULATOR FOR THOSE WHO ARE JUST BEGINNING TO USE THE SIMULATOR. WE WILL BEGIN BY SIMULATING A BASIC RUN.

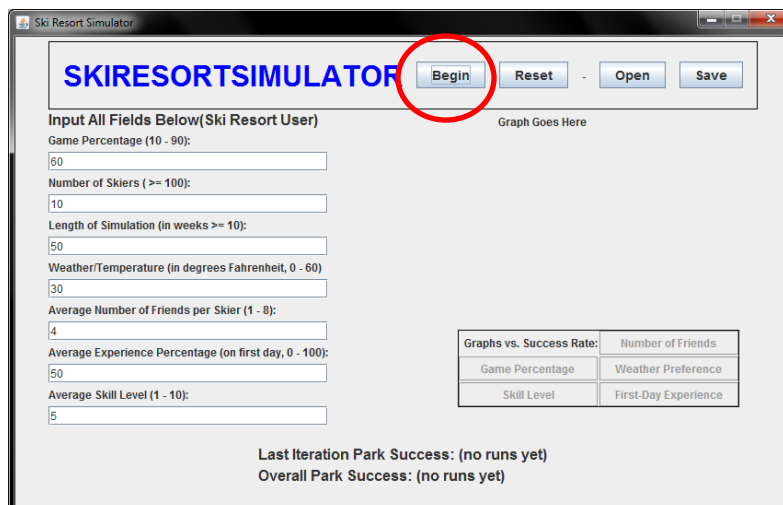
### STEP 1.)

WHEN ONE FIRST OPENS THE PROGRAM, THEY ARE PRESENTED WITH A CHOICE OF EITHER "SKI RESORT" OPERATION OR "INDIVIDUAL" OPERATION. FOR THIS TUTORIAL, WE WILL CHOOSE THE "SKI RESORT" OPTION.



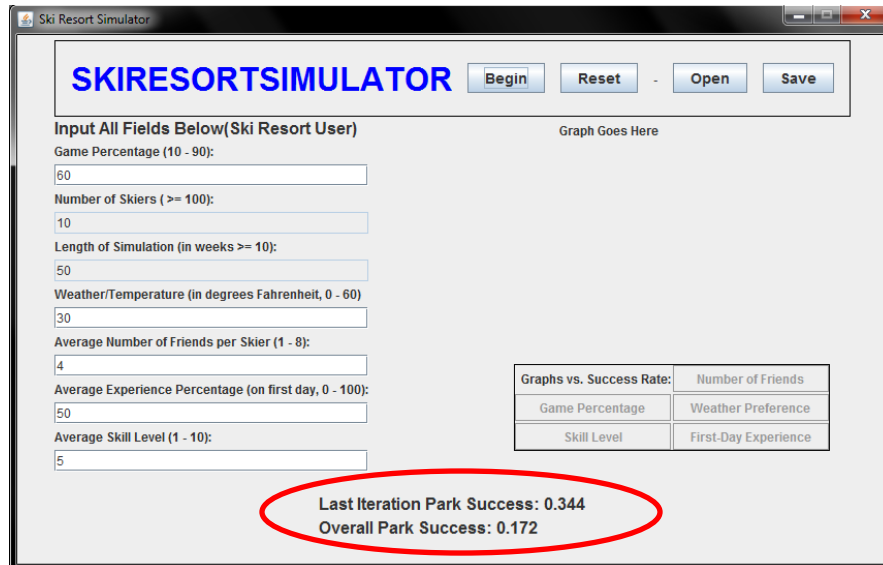
### STEP 2.)

NOW WE ARE PRESENTED WITH A LARGER, MUCH MORE ADVANCED GUI. DON'T WORRY, THIS GUI HAS MANY CAPABILITIES WHICH WILL HELP US TO SIMULATE IN THE FUTURE. FOR NOW SIMPLY LOCATE THE "BEGIN" BUTTON AND CLICK IT. THIS WILL RUN THE SIMULATION.



### STEP 3.)

YOU'VE DONE IT! CONGRATULATIONS, YOU HAVE JUST RUN YOUR FIRST SIMULATION WE SKI RESORT SIMULATOR. YOU CAN NOW OBSERVE THE OUTPUTS OF YOUR SIMULATION.



The screenshot shows the SKIRESORTSIMULATOR window. The title bar says "Ski Resort Simulator". The main window has a title "SKIRESORTSIMULATOR" and buttons for "Begin", "Reset", "Open", and "Save". Below the title, there is a section "Input All Fields Below(Ski Resort User)" with the following fields:

- Game Percentage (10 - 90): 60
- Number of Skiers ( >= 100): 10
- Length of Simulation (in weeks >= 10): 50
- Weather/Temperature (in degrees Fahrenheit, 0 - 60): 30
- Average Number of Friends per Skier (1 - 8): 4
- Average Experience Percentage (on first day, 0 - 100): 50
- Average Skill Level (1 - 10): 5

To the right of these fields is a placeholder "Graph Goes Here". Below the input fields, there is a table with the following data:

Graphs vs. Success Rate:	
Game Percentage	Number of Friends
Skill Level	Weather Preference
	First-Day Experience

At the bottom of the window, there is a red oval containing the following text:

Last Iteration Park Success: 0.344  
Overall Park Success: 0.172



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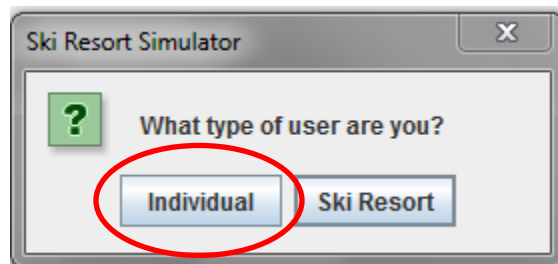
## Example Tutorial 1

THE FIRST EXAMPLE TUTORIAL EXPLAINS A MORE ADVANCED USE OF THE SIMULATOR BY CHANGING SETTINGS AND GIVES THE USER A FIRST LOOK AT THE SIMULATOR IN "INDIVIDUAL MODE."

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### STEP 1.)

LET'S BEGIN BY CHOOSING THE "INDIVIDUAL" OPTION FOR THIS EXAMPLE.



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### STEP 2.)

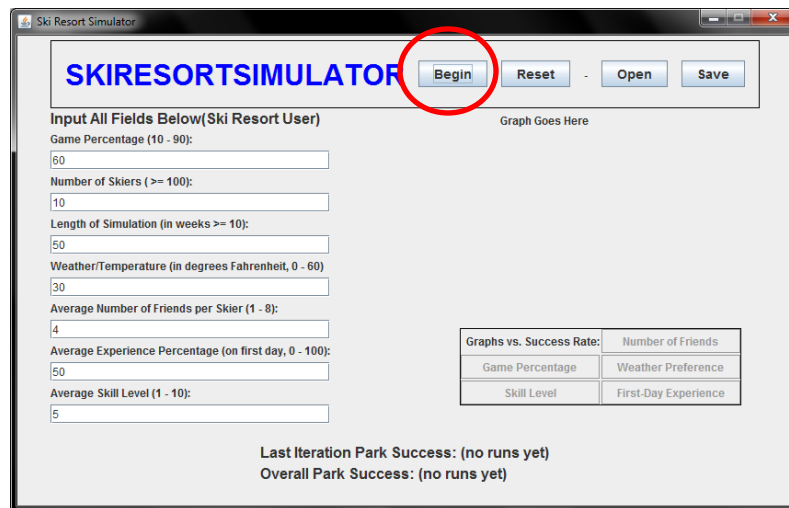
NOW, TO MAKE THINGS MORE INTERESTING, LET'S TRY TO SET THE NUMBER OF WEEKS SETTING TO "100" INSTEAD OF THE DEFAULT "10."

A screenshot of the 'Ski Resort Simulator' main interface. The window has a title bar with the text 'Ski Resort Simulator'. Below the title bar is a large blue header 'SKIRESORTSIMULATOR' followed by four buttons: 'Begin', 'Reset', 'Open', and 'Save'. Below the header is a section titled 'Input All Fields Below(Individual User)'. This section contains several input fields: 'Game Percentage (10 - 90):' with a value of 60, 'Number of Skiers (>= 100):' with a value of 10, 'Length of Simulation (in weeks >= 10):' with a value of 100 (circled in red), 'Weather/Temperature (in degrees Fahrenheit, 0 - 60):' with a value of 30, 'Average Number of Friends per Skier (1 - 8):' with a value of 4, and 'Decision Percentage (20 - 80):' with a value of 50. To the right of these input fields is a section titled 'Graphs vs. Success Rate:' which contains a table with four rows and two columns. The first column is 'Game Percentage' and the second column is 'Weather Preference'. The first row is 'Number of Friends' and the second row is 'IQ (1 - 4)'. At the bottom of the window, there are two lines of text: 'Last Iteration Park Success: (no runs yet)' and 'Overall Park Success: (no runs yet)'.

---

### STEP 3.)

AS IN THE PREVIOUS TUTORIAL, CLICK THE BEGIN BUTTON AFTER CHANGING THE TEXT BOX DESIGNATED IN STEP 2 AND OBSERVE THE RESULTS AFTERWARDS. CONGRATULATIONS! YOU HAVE NOW FINISHED THE FIRST EXAMPLE TUTORIAL.



The screenshot shows the SKIRESORTSIMULATOR application window. The title bar reads "Ski Resort Simulator". The main window has a header with the title "SKIRESORTSIMULATOR" and four buttons: "Begin", "Reset", "Open", and "Save". The "Begin" button is circled in red. Below the header, there is a section titled "Input All Fields Below(Ski Resort User)". This section contains several input fields with labels and ranges: "Game Percentage (10 - 90):" with a value of 60, "Number of Skiers (>= 100):" with a value of 10, "Length of Simulation (in weeks >= 10):" with a value of 50, "Weather/Temperature (in degrees Fahrenheit, 0 - 60)" with a value of 30, "Average Number of Friends per Skier (1 - 8):" with a value of 4, "Average Experience Percentage (on first day, 0 - 100):" with a value of 50, and "Average Skill Level (1 - 10):" with a value of 5. To the right of these fields is a placeholder text "Graph Goes Here". Below the input fields, there is a table titled "Graphs vs. Success Rate:" with four columns: "Game Percentage", "Weather Preference", "Skill Level", and "First-Day Experience". At the bottom of the window, there is a status bar that reads "Last Iteration Park Success: (no runs yet)" and "Overall Park Success: (no runs yet)".



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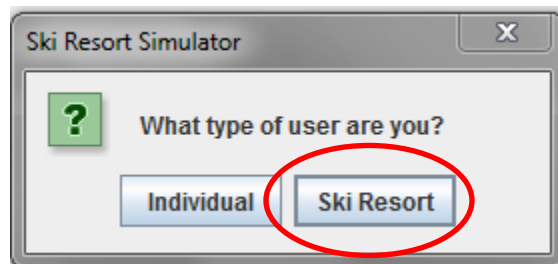
## Example Tutorial 2

THE SECOND EXAMPLE TUTORIAL GOES A BIT FURTHER AS TO CHANGE SEVERAL SETTINGS. HOWEVER, THIS GIVES A PRIME EXAMPLE OF THE PLETHORA OF SCENARIOS THE SKI RESORT SIMULATOR CAN COVER.

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### STEP 1.)

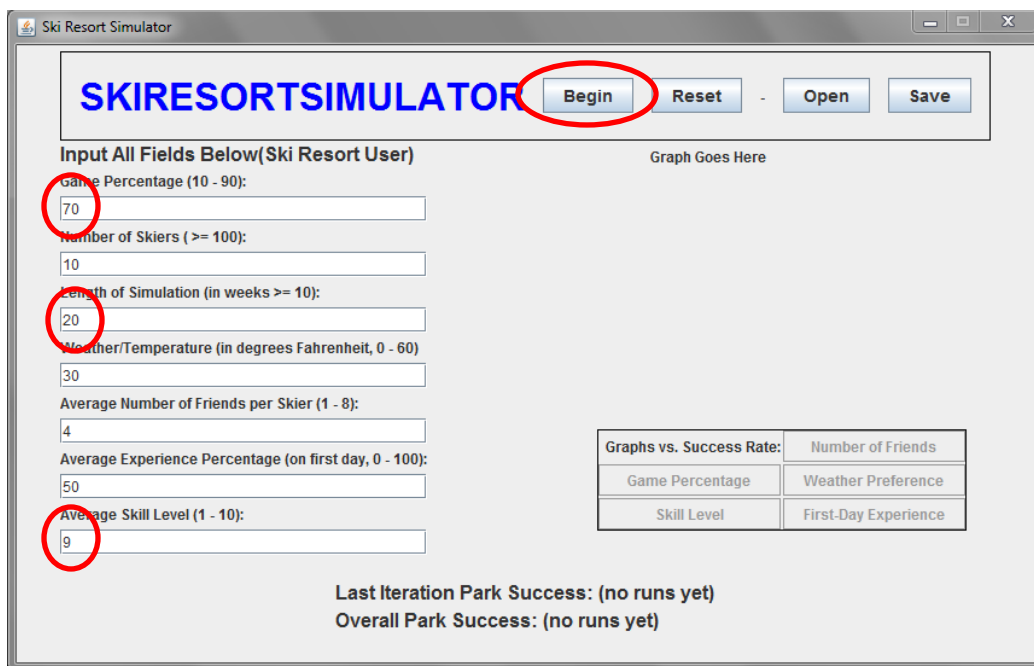
LET'S BEGIN BY CHOOSING THE "SKI RESORT" OPTION FOR THIS EXAMPLE.



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### STEP 2.)

NEXT, LET'S SET THREE DIFFERENT SETTINGS FOR THIS EXAMPLE. LET'S SET THE "GAME PERCENTAGE" SETTING TO "70." THEN, LET'S SET THE "LENGTH OF SIMULATION" TO "20." FINALLY, SET THE "AVERAGE SKILL LEVEL" TO "9." THEN PRESS OUR OLD FRIEND THE "BEGIN" BUTTON.





### STEP 3.)

THERE'S ONLY ONE THING LEFT TO DO! OBSERVE THOSE RESULTS AND USE THEM TO HELP YOU HAVE THE GREATEST SKI RESORT EXPERIENCE YOU CAN! CONGRATULATIONS ON COMPLETING THE TUTORIALS.

**SKIRESORTSIMULATOR**

**Input All Fields Below(Ski Resort User)** Graph Goes Here

Game Percentage (10 - 90):

Number of Skiers ( >= 100):

Length of Simulation (in weeks >= 10):

Weather/Temperature (in degrees Fahrenheit, 0 - 60)

Average Number of Friends per Skier (1 - 8):

Average Experience Percentage (on first day, 0 - 100):

Average Skill Level (1 - 10):

Graphs vs. Success Rate:	
Game Percentage	Number of Friends
Skill Level	Weather Preference
	First-Day Experience

**Last Iteration Park Success: 0.285**  
**Overall Park Success: 0.1425**



# CHAPTER 3:

## *Saving Files Description*

SAVING CAN BE A VERY IMPORTANT THING WHEN DOING COMPLEX WORK WHICH NEEDS TO BE WORKED ON AGAIN AND AGAIN. BECAUSE OF THIS, SAVING A FILE HAS BECOME AN INTEGRAL PART OF THE SKI RESORT SIMULATOR. IN THE FOLLOWING TUTORIAL, YOU TOO CAN LEARN HOW TO SAVE A FILE WITH THE SKI RESORT SIMULATOR. THIS WAY, YOU CAN SAVE YOUR RESULTS IN CASE YOU NEED TO RUN MANY CONTINUOUS SIMULATIONS. THESE CONTINUOUS SIMULATIONS BUILD UPON EACH OTHER AND AFFECT A TOTAL AVERAGE FOR THE PARK IN THAT SAVE FILE. BY DOING THIS, ONE CAN SIMULATE THE ENTIRE LIFE OF A SKI RESORT PARK. YOU CAN ALSO SIMULATE THE ENTIRE LIFE OF A SKIER WHO ATTENDS THE SAME PARK. YOU MAY ALSO WANT TO CONSIDER USING MULTIPLE SAVE FILES TO EACH REPRESENT A DIFFERENT SKIER AND TO OBSERVE WHO IS THE MOST SUCCESSFUL BASED ON THEIR DECISIONS. IN THIS WAY, SAVING CAN BE BENEFICIAL TO BOTH RESORT OWNERS AND SKIERS. HAPPY SAVING!



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## Saving Tutorial

THIS TUTORIAL GIVES A BRIEF, BUT COMPLETE, EXPLANATION OF HOW TO SAVE A FILE AND OPEN IT AGAIN FOR CONTINUED USE.

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### STEP 1.)

IN THIS TUTORIAL, WE CAN BEGIN BY ENTERING ANY MODE OF OPERATION. THAT IS, EITHER "SKI RESORT" MODE OR "INDIVIDUAL" MODE. AFTER YOU MAKE A CHOICE, YOU WILL SEE THE MAIN GUI. ON THIS GUI THERE WILL BE A SAVE BUTTON AS DEMONSTRATED IN THE PICTURE BELOW. CLICK ON THIS.

**SKIRESORTSIMULATOR**   **Begin**   **Reset**   -   **Open**   **Save**

**Input All Fields Below(Ski Resort User)**   **Graph Goes Here**

Game Percentage (10 - 90):  
60

Number of Skiers (>= 100):  
10

Length of Simulation (in weeks >= 10):  
50

Weather/Temperature (in degrees Fahrenheit, 0 - 60)  
30

Average Number of Friends per Skier (1 - 8):  
4

Average Experience Percentage (on first day, 0 - 100):  
50

Average Skill Level (1 - 10):  
5

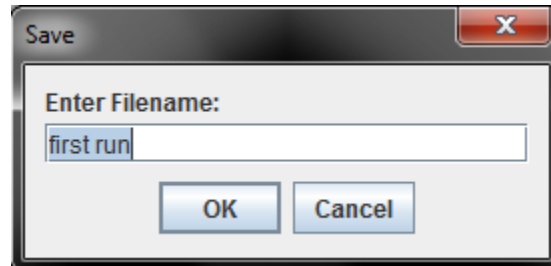
Graphs vs. Success Rate:	Number of Friends
Game Percentage	Weather Preference
Skill Level	First-Day Experience

**Last Iteration Park Success: (no runs yet)**  
**Overall Park Success: (no runs yet)**

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## STEP 2.)

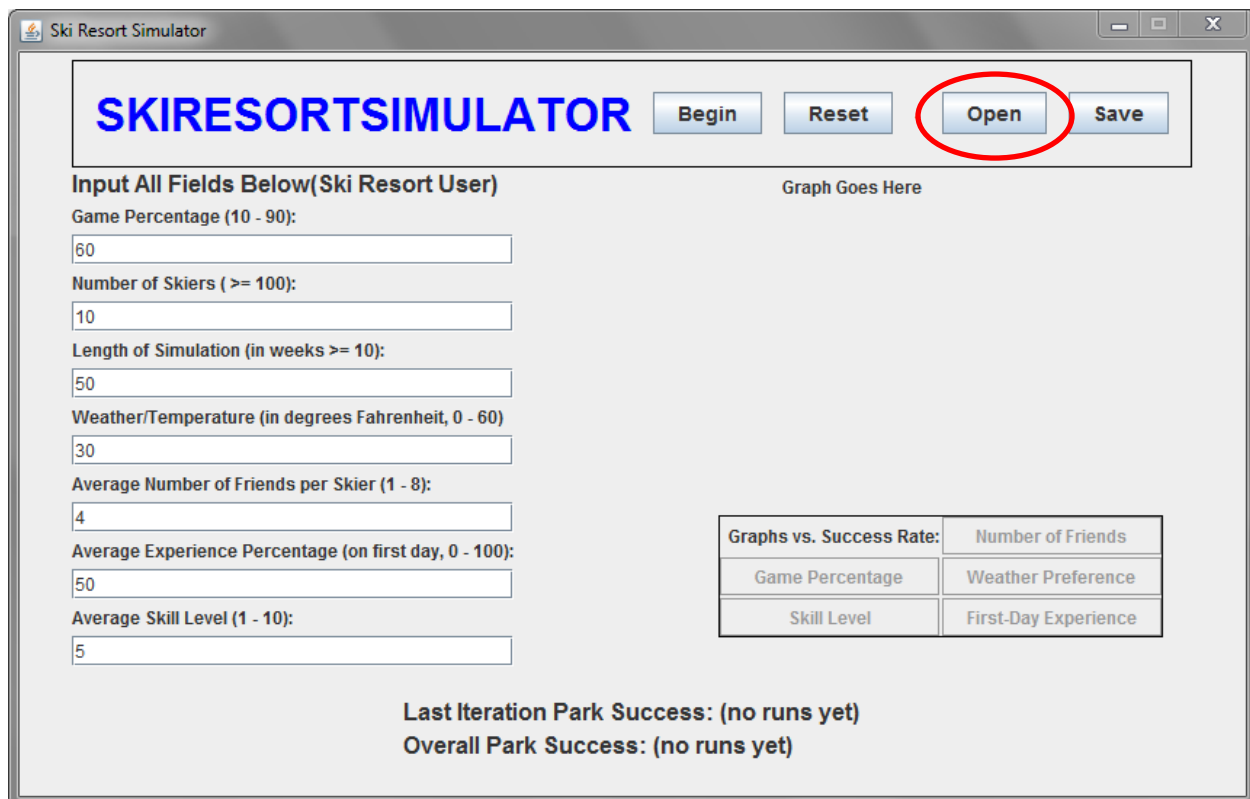
YOU WILL THEN BE PRESENTED WITH A SIMPLE DIALOG BOX. IN THIS DIALOG BOX, YOU CAN NAME YOUR FILE, AND THEN CLICK THE “OK” BUTTON. YOUR FILE WILL THEN BE SAVED IN THE DEFAULT LOCATION.



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## STEP 3.)

TO OPEN UP YOUR SAVE FILE, CLICK ON THE “OPEN” BUTTON WHICH IS LOCATED NEXT TO YOUR “SAVE” BUTTON.



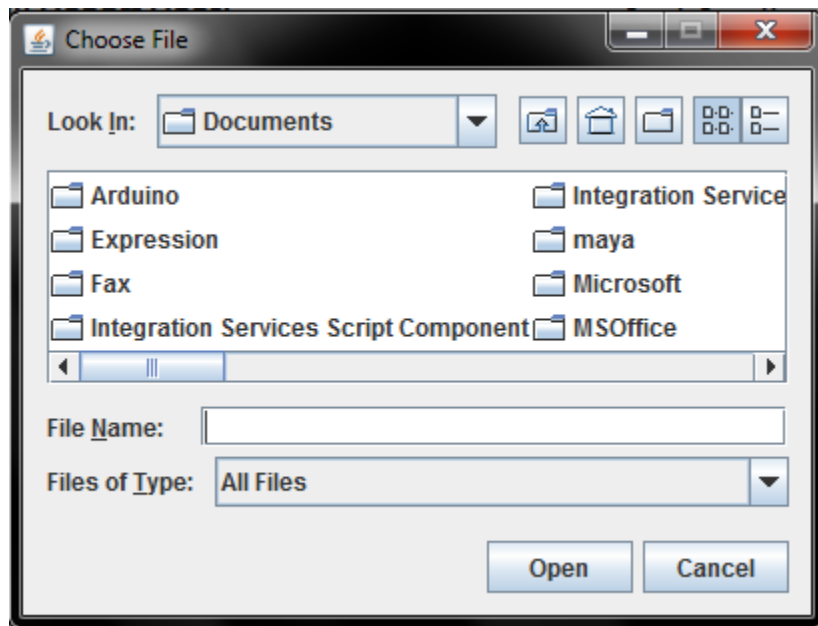
Graphs vs. Success Rate:	Number of Friends
Game Percentage	Weather Preference
Skill Level	First-Day Experience

Last Iteration Park Success: (no runs yet)  
Overall Park Success: (no runs yet)

---

#### STEP 4.)

NOW, YOU CAN SEE A STANDARD “OPEN FILE” DIALOG BOX. SIMPLY LOCATE YOUR FILE AND PRESS “OPEN” AND ALL YOUR STATISTICS AND SETTINGS WILL BE LOADED.



# CHAPTER 4:

## *Graphs Description*

FOR THIS VERSION OF SKI RESORT SIMULATOR, GRAPHS HAVE NOT YET BEEN IMPLEMENTED. THEREFORE, THIS TUTORIAL WILL BE INSTATED IN THE FINAL EDITION OF THE DOCUMENTATION, WHERE IT WILL BE COVERED AND EXPLAINED IN FULL DETAIL, SIMILAR TO THE PREVIOUS TUTORIALS GIVEN.



# CHAPTER 5:

## *Outputs Description*

FOR THE SKI RESORT SIMULATOR PROGRAM, OUTPUT IS OUR MAIN CONCERN. WITHOUT OUTPUT, A USER WILL NOT BE ABLE TO EFFECTIVELY UTILIZE THE DATA TO HAVE A MORE ENJOYABLE EXPERIENCE. OUR PROGRAM HAS TWO DATA OUTPUT PANELS AT THE BOTTOM OF THE GUI. THESE IMPORTANT PANELS DISPLAY THE DATA RELATED TO YOUR SIMULATION. THE FIRST PANEL DISPLAYS THE "LAST ITERATION PARK SUCCESS" WHICH DISPLAYS THE MOST RECENT SUCCESS OF THE PARK. THE SECOND PANEL DISPLAYS THE "OVERALL PARK SUCCESS" WHICH DISPLAYS THE AMOUNT OF SUCCESSFUL DAYS THE PARK HAS RAN WITHOUT OVERCROWDING. BOTH OUTPUTS WILL BE SHOWN AS A DECIMAL. THE HIGHER THE DECIMAL, THE MORE SUCCESSFUL THE PARK HAS BEEN. THESE OUTPUTS ARE CIRCLED IN RED ON THE FOLLOWING PAGE. MAY THEY HELP YOU IMMENSELY IN YOUR GOALS REGARDING SKI RESORTS.



## Output Panels

Ski Resort Simulator

SKIRESORTSIMULATOR

Begin

Reset

-

Open

Save

Input All Fields Below(Ski Resort User)

Game Percentage (10 - 90):

Number of Skiers ( >= 100):

Length of Simulation (in weeks >= 10):

Weather/Temperature (in degrees Fahrenheit, 0 - 60)

Average Number of Friends per Skier (1 - 8):

Average Experience Percentage (on first day, 0 - 100):

Average Skill Level (1 - 10):

Graph Goes Here

Graphs vs. Success Rate:	Number of Friends
Game Percentage	Weather Preference
Skill Level	First-Day Experience

Last Iteration Park Success: (no runs yet)

Overall Park Success: (no runs yet)





# CHAPTER 6:

## References

THIS SECTION IS SIMPLY INTENDED TO GIVE A LIST OF EASILY AVAILABLE REFERENCES WHICH CAN BE USED TO QUICKLY LOOK UP INFORMATION REGARDING THE SKI RESORT SIMULATOR. WE HOPE THAT IT WILL BE A USEFUL TOOL FOR YOUR FUTURE SIMULATIONS. CONTAINED IN THIS SECTION IS EACH NUMBERED REFERENCE WITH A SMALL DESCRIPTION OF WHAT IT REFERS TO AND ITS RELATED PURPOSE. THIS SECTION WILL BE MOST USEFUL WHEN DETERMINING WHICH INPUT FIELDS AFFECT WHAT ASPECTS OF THE SIMULATION THE MOST.

CONTROLS ARE ALSO LISTED BUT IT IS RECOMMENDED TO THE USER THAT THE TUTORIALS BE USED FOR CONTROL REFERENCE OVER THIS SECTION. HOWEVER, FOR A QUICK REMINDER, THIS SECTION WILL ALWAYS FULFILL THIS PURPOSE.



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## References

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### 1.) GAME PERCENTAGE:

THIS IS AN INPUT FOR THE PROGRAM. THIS INPUT CONTROLS WHAT THE CUTOFF PERCENT IS FOR THE PARK TO HAVE A SUCCESSFUL DAY. IF THE DAY'S ATTENDANCE IS OVER THIS PERCENT, THE DAY WILL BE UNSUCCESSFUL. IF IT IS BELOW THIS PERCENT, IT WILL BE SUCCESSFUL.

---

### 2.) NUMBER OF SKIERS:

THIS IS AN INPUT FOR THE PROGRAM. IT DECIDES HOW MANY SKIERS WILL BE INVOLVED IN THE SIMULATION.

---

### 3.) LENGTH OF SIMULATION:

THIS IS AN INPUT FOR THE PROGRAM. IT DECIDES HOW LONG THE SIMULATION WILL RUN FOR.

---

### 4.) WEATHER:

THIS IS AN INPUT FOR THE PROGRAM. IT DECIDES HOW THE AVERAGE WEATHER WILL BE FOR THE NEXT SIMULATION RUN.

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### 5.) AVERAGE NUMBER OF FRIENDS:

THIS IS AN INPUT FOR THE PROGRAM. IT DECIDES HOW MANY FRIENDS EACH SKIER WILL HAVE ON AVERAGE.

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### 6.) AVERAGE EXPERIENCE PERCENTAGE:

THIS IS AN INPUT FOR THE PROGRAM. IT DECIDES THE AVERAGE LEVEL THAT EXPERIENCE WILL AFFECT EACH SKIER.

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#### 7.) AVERAGE SKILL LEVEL:

THIS IS AN INPUT FOR THE PROGRAM. IT DECIDES THE AVERAGE SKILL LEVEL FOR EACH SKIER.

---

#### 8.) BEGIN:

THIS IS A COMMAND FOR THE PROGRAM. USE THIS TO BEGIN THE SIMULATION.

---

#### 9.) RESET:

THIS IS A COMMAND FOR THE PROGRAM. USE THIS TO RESET THE SIMULATION.

---

#### 10.) OPEN:

THIS IS A COMMAND FOR THE PROGRAM. USE THIS TO OPEN A PREVIOUS SIMULATION.

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#### 11.) SAVE:

THIS IS A COMMAND FOR THE PROGRAM. USE THIS TO SAVE YOUR CURRENT SIMULATION SETTINGS AND OUTPUTS TO A FILE.



# INDEX

## Index Contents

THIS IS THE INDEX OF THIS DOCUMENTATION. THIS INDEX WILL GIVE YOU THE ABILITY TO SEARCH THIS MANUAL EASILY AND EFFECTIVELY, SO THAT YOU MAY QUICKLY REFERENCE INFORMATION YOU NEED IN A HURRY. IT SHOWS YOU PAGE NUMBERS FOR EACH TOPIC AND IS AS THOROUGH AS POSSIBLE. GOOD LUCK IN ALL YOUR SEARCHES!



BASIC.....	3
COMMAND.....	18
GRAPHS.....	13
INPUTS.....	17,18
OPERATIONS.....	2,3
OUTPUTS.....	14
OVERVIEW.....	9,14
REFERENCE.....	16
SAVING.....	9,10
TUTORIAL.....	3,5,7,10,13

