

MWVC3 2024

Round 2

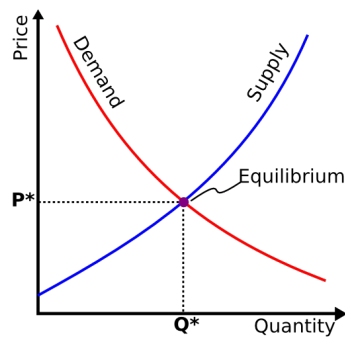


Scrimmage**SIM**

BUSINESS SIMULATIONS

Scenario 200 – Price Changes

This scenario is similar to Scenario 100—Basic Brewery. The only difference is that in this scenario, the user can change the price for each product. Basic economic principles of supply and demand are operative in this scenario.



If the price for a product is increased, more money will be made off of each case sold, but the demand will decrease. Conversely, if the price is decreased, demand will increase but less money will be made off of each case sold.

These instructions only cover changing the price for each style of beer sold. Refer to the instructions for Scenario 100 for details on other features of this scenario.

The default price and cost information for each of the three beer styles is provided below:

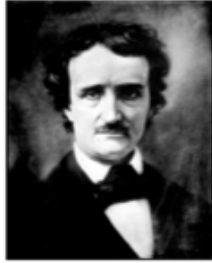
AliCat Ale



Custom Crafted at the
Arborcrest Ale Studios
5.5% Alcohol by Volume
Summer Product

Cost: \$10.08/CS
Sell: \$15.5/CS

Edgar Ale



Custom Crafted at the
Arborcrest Ale Studios
5.5% Alcohol by Volume
Winter Product

Cost: \$9.34/CS
Sell: \$14.5/CS


Taj Majal MRE



Mendon Red Elixer
Custom Crafted at the
Arborcrest Ale Studios
7.6% Alcohol by Volume
Year-round

Cost: \$10.43/CS
Sell: \$17.5/CS

To change the prices, follow the menu path **Marketing**→**Pricing**:



Main>

- Exit
- Sales...
- Marketing...
- Production...
- Inventory...
- Results...
- E-mail
- Chat...

\$ Change Price

Tenant: 1750 - BUS 1750 - Wagner
 Scenario: 200 - Arborcrest with Pricing
 Team 20
 Run: 201 - Test Run 1
 User: Student-60 - Stuart Wagner
 Simulation Time: 01/01/2024 12:00:00 AM

This will produce the following screen:

Set Price

Tenant: 1750 - BUS 1750 - Wagner
Scenario: 200 - Arborcrest with Pricing
Team 20
Run: 201 - Test Run 1
User: Student-60 - Stuart Wagner
Simulation Time: 01/01/2024 12:00:00 AM

← Back × Close ↻ Refresh Open Window

Controls to change price

Material: AliCatCS12 - AliCat Ale 12oz bottle case
Price: 15.5 Update Price

Price Change History

Material_Number	Price	Currency	User	Simulation Time	Actual Time
AliCatCS12	\$15.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM
EDGRCS12	\$14.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM
TajMCS12	\$17.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM

Price History

To change a price on this screen, select the material, enter the new price and then click **Update Price**. For example, to increase the price of Edgar Ale by \$1.00, first select Edgar Ale:

Set Price

Tenant: 1750 - BUS 1750 - Wagner
Scenario: 200 - Arborcrest with Pricing
Team 20
Run: 201 - Test Run 1
User: Student-60 - Stuart Wagner
Simulation Time: 01/01/2024 12:00:00 AM

← Back × Close ↻ Refresh Open Window

Select Edgar Ale

Material: AliCatCS12 - AliCat Ale 12oz bottle case
EDGRCS12 - Edgar Ale 12oz bottle case
Price: TajMCS12 - Taj Mahal 12oz bottle case

Price Change History

Material_Number	Price	Currency	User	Simulation Time	Actual Time
AliCatCS12	\$15.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM
EDGRCS12	\$14.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM
TajMCS12	\$17.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM

The current price is 14.5 (\$14.50):

Set Price

Tenant: 1750 - BUS 1750 - Wagner
Scenario: 200 - Arborcrest with Pricing
Team 20
Run: 201 - Test Run 1
User: Student-60 - Stuart Wagner
Simulation Time: 01/01/2024 12:00:00 AM

← Back × Close ↻ Refresh Open Window

Material: EDGRCS12 - Edgar Ale 12oz bottle case ▾

Price: 14.5 Update Price

Price Change History

Material_Number	Price	Currency	User	Simulation Time	Actual Time
AliCatCS12	\$15.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM
EDGRCS12	\$14.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM
TajMCS12	\$17.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM

Current price is 14.5

Change the price to 15.5 (\$15.50) and click on **Update Price**:

Set Price

Tenant: 1750 - BUS 1750 - Wagner
Scenario: 200 - Arborcrest with Pricing Team 20
Run: 201 - Test Run 1
User: Student-60 - Stuart Wagner
Simulation Time: 01/01/2024 12:00:00 AM

← Back × Close ↻ Refresh Open Window

Material: EDGRCS12 - Edgar Ale 12oz bottle case ▼

Price: 15.5 Update Price

Set price to 15.5 then click update Price

Price Change History

Material_Number	Price	Currency	User	Simulation Time	Actual Time
▼	Search...	Search...	▼	Search...	Search...
AliCatCS12	\$15.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM
EDGRCS12	\$14.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM
TajMCS12	\$17.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM

The new price is listed at the top of the price change history, and the user who made the change is also displayed:

Set Price

Tenant: 1750 - BUS 1750 - Wagner
Scenario: 200 - Arborcrest with Pricing Team 20
Run: 201 - Test Run 1
User: Student-60 - Stuart Wagner
Simulation Time: 01/01/2024 12:00:00 AM

← Back × Close ↻ Refresh Open Window

Material: EDGRCS12 - Edgar Ale 12oz bottle case ▼

Price: 15.5 Update Price

Edgar price changed to 15.5 by Student-60

Price Change History

Material_Number	Price	Currency	User	Simulation Time	Actual Time
▼	Search...	Search...	▼	Search...	Search...
EDGRCS12	\$15.50	USD	Student-60	01/01/2024	01/20/2021 12:25:02 PM
AliCatCS12	\$15.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM
EDGRCS12	\$14.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM
TajMCS12	\$17.50	USD	Initial	01/01/2024	01/11/2021 08:29:38 PM

Conclusion

The simulation will run for one simulated year, and because you can change the price, you should have very few or now stockouts. You now have two “levers” to avoid stockouts—production decisions and pricing. If you are in danger of stocking out of a product, raising the price is the quickest way to avoid a stockout. Production orders will take a minimum of 15 days to increase inventory—more depending on how many production orders are in the workcenter queue.

Make sure to work with your teammate to make the most effective business decisions. You need to make decisions together and run the simulation like a real company. Remember, “You have to make stuff to make money!”

Good luck!

MWVC3 2024

Round 1



ScrimmageSIM
BUSINESS SIMULATIONS

What is ScrimmageSIM?

ScrimmageSim is designed to be like an Enterprise Resources Planning (ERP) system. ERP Systems are used by most medium and large companies to run their businesses efficiently.

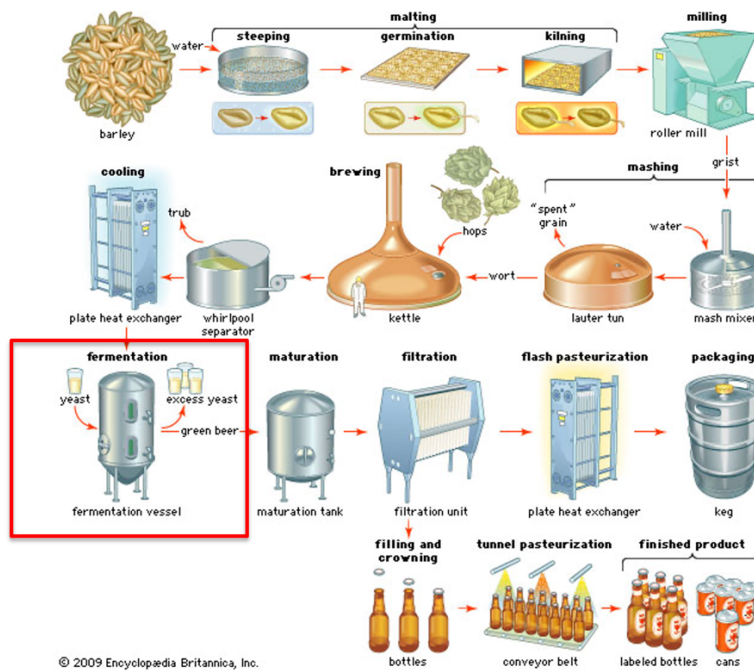
Arborcrest Ale Studios is a fictional company that represents a small regional brewery. There are multiple steps in the brewing process that are done by outside companies, for example, malting the grain. In the brewery, there are processes like mashing, lautering, and brewing that convert the grain to a sugar-water mixture called wort.



Yeast is added to the wort so that as the yeast grows, it converts the sugar in the wort into alcohol and carbon dioxide. In these simulations, we will be managing the fermentation process to control the production of beer.

Once the fermentation process is complete, the beer must be bottled before it can be sold. This process will take one day.

Brewing Process



Quick Facts about Arborcrest Ale Studios

- The company has 4 fermenters
- Each fermenter holds 100 barrels of beer, which will produce 1,240 cases of beer
- It takes 14 days to ferment the beer plus one day for bottling

Arborcrest Sells 3 products:

Product	Selling Price / case	Cost / case	Gross Profit / case	Annual Sales (cases)	Seasonality
AliCat	\$15.50	\$10.08	\$5.42	43,000	Summer Product
Edgar Ale	\$14.40	\$9.34	\$5.06	16,000	Winter Product
Taj Mahal	\$17.50	\$10.43	\$7.07	24,000	Year-Round

Simulation And Time

The simulation will run from January 1, 2024, to January 1, 2025

~8 seconds real-time = 1 Simulated Day

Logging In

1. Enter the URL **scrimmagesim.com** in your web browser.
2. Click **LOGIN** in the upper right corner of the page.



HOME PRICING **LOGIN** SUPPORT

3. Select **MWC3** from the University drop-down.
4. Select **Student Competition** from the course drop-down.
5. Select **Bret Wagner** from the instructor drop-down. Your screen should look like the following:



Login: Select Class

University:

Course:

Instructor:

6. Click the **next** button. This will take you to the following screen:



Login to ScrimmageSIM

Tenant:

UserId:

Password:

Language:

Enter **2023** for Tenant
Enter the UserID assigned to you
Enter **password** for the password

- Next, you will need to reset your password. The only requirement is that it needs to be six characters long.



Reset Password

Password:

Repeat PW:

Enter the new password twice.

- Next, you will need to enter your:
 - First name
 - Last name
 - email address

Enter User Data

First:

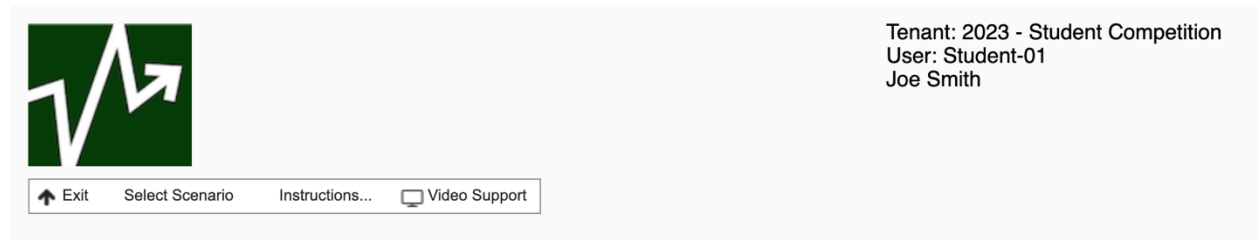
Last:

e-mail:

- Click enter and you will be taken to the main menu.

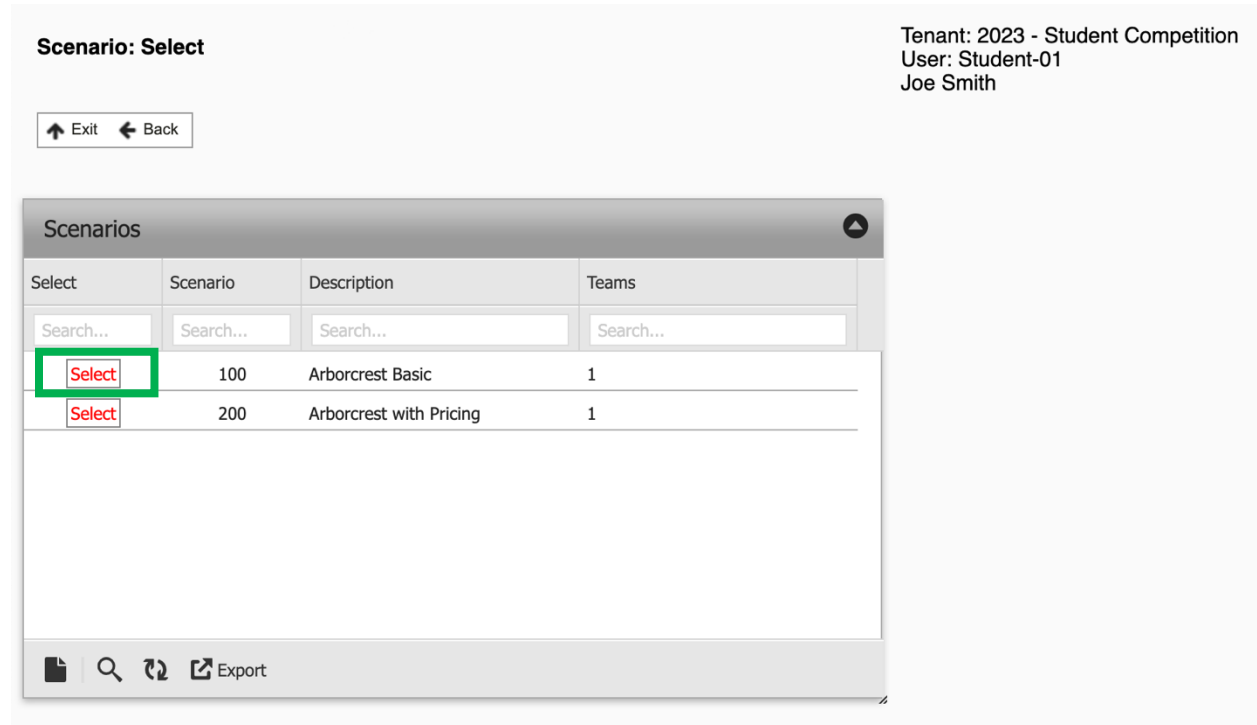
Main Menu

You should now be at the main screen. It should look like this.



Scenarios

For this competition, we will be using two scenarios. From the main menu, click on **Select Scenario**. This will produce the following screen:



In Scenario 100, you will try to maximize your company's Earnings Before Tax (EBT) by scheduling the beer production. Scenario 200 is the same, except you will be able to change the price you charge for your beer.

Select Scenario 100 and you will be at the following screen:


Run: Select

Tenant: 2023 - Student Competition
Scenario: 100 - Arborcrest Basic
User: Student-01
Joe Smith

← Back ↻ Refresh Open Window

Select	Run	Run_Num	Team	Description
Search...	Search...	Search...	Search...	Search...
Select	11	1	1	Test Run 1

We will only be doing one run of this simulation, so click on **Select** to select the first (only) run. This will bring you to the main menu of the simulation:



Main>

↑ Exit Sales... Production... Inventory... Results... E-mail Chat...

Tenant: 2023 - Student Competition
Scenario: 100 - Arborcrest Basic
Team 1
Run: 11 - Test Run 1
User: Student-01
Joe Smith
Simulation Time: 01/01/2024 12:00:00 AM

On every screen you can see the simulation date and time

Menu Options

Sales

1. Click the first option ( Sales) under **Sales** in the menu bar:



Main>

↑ Exit Sales... Production... Inventory... Results... E-mail Chat...

Sales
Sales - Monthly
Sales - Monthly
Sales - Monthly

Tenant: 2023 - Student Competition
Scenario: 100 - Arborcrest Basic
Team 1
Run: 11 - Test Run 1
User: Student-01
Joe Smith
Simulation Time: 01/01/2024 12:00:00 AM

Here we get information on sales for Arborcrest's three products for the last 3 years

You can filter each column by clicking on the pull-downs under the headings

In all scenarios, demand comes from a distributor every Wednesday

If you have enough stock on hand, you will complete the sale. If not, the distributor will buy what you have and will not backorder.

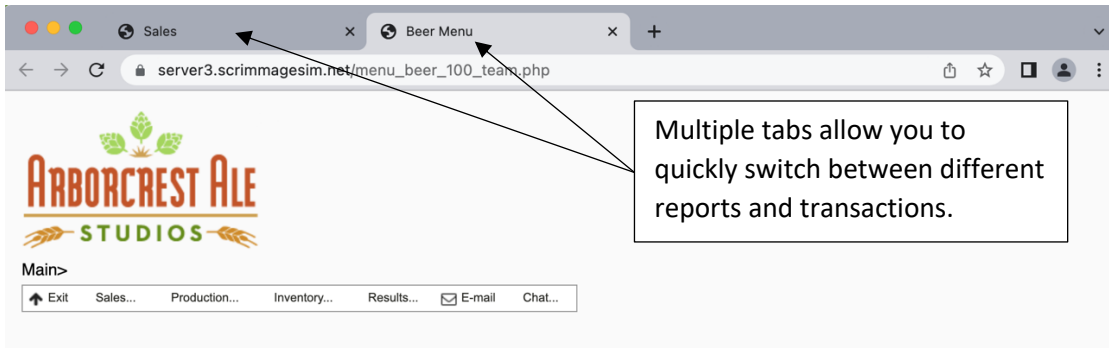
If you click export, the data in this screen will be exported to an Excel spreadsheet that you can use for further analysis.

Material	Description	Date	Quantity	U of M	Price
AliCatCS12	AliCat Ale 12oz bottles	01/06/2021	104	CS	16.5
EDGRCS12	Edgar Ale 12oz bottles	01/06/2021	654	CS	14.5
TajMCS12	Taj Mahal Ale 12oz bottles	01/06/2021	501	CS	17.5
AliCatCS12	AliCat Ale 12oz bottles	01/13/2021	152	CS	16.5
EDGRCS12	Edgar Ale 12oz bottles	01/13/2021	670	CS	14.5
TajMCS12	Taj Mahal Ale 12oz bottles	01/13/2021	493	CS	17.5
AliCatCS12	AliCat Ale 12oz bottles	01/20/2021	130	CS	16.5
EDGRCS12	Edgar Ale 12oz bottles	01/20/2021	691	CS	14.5
TajMCS12	Taj Mahal Ale 12oz bottles	01/20/2021	526	CS	17.5

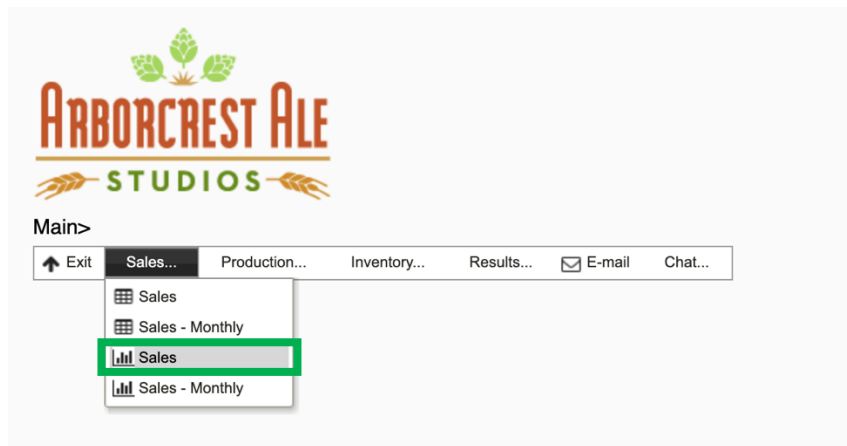
2. Click on **Open Window** to open a new browser tab:

Tenant: 2023 - Student Competition
Scenario: 100 - Arborcrest Basic
Team 1
Run: 11 - Test Run 1
User: Student-01
Joe Smith
Simulation Time: 01/01/2024 12:00:00 AM

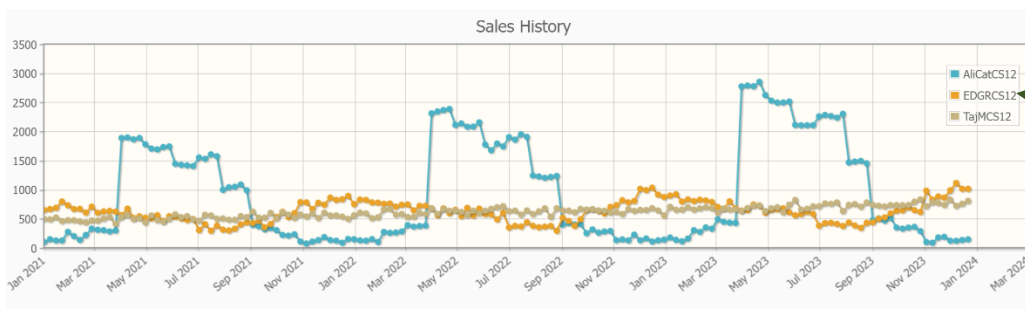
Material	Description	Date	Quantity	U of M	Price
AliCatCS12	AliCat Ale 12oz bottles	01/06/2021	104	CS	16.5
EDGRCS12	Edgar Ale 12oz bottles	01/06/2021	654	CS	14.5
TajMCS12	Taj Mahal Ale 12oz bottles	01/06/2021	501	CS	17.5



3. Select the Sales Graph ( Sales) from the drop-down menu:



- This provides a graph of the sales history for all beers for the last three years:



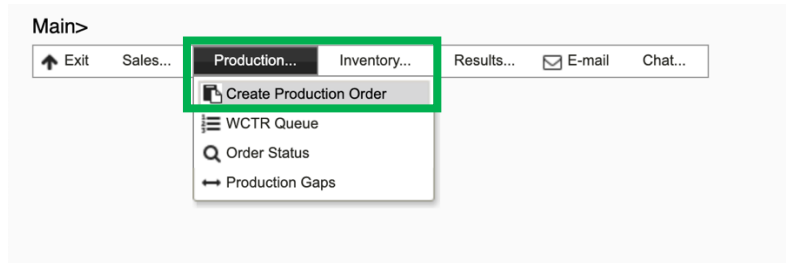
You can remove a beer from the graph by clicking on the legend

Important note:

You will not have enough production capacity to meet all of the demand in the summer. You will want to build up the inventory of AliCat Ale as much as possible before the demand increases in April. You will also want to make sure that you do not run out of Taj Mahal beer as it has the highest gross margin.

Production

1. Click on **Open Window** in the sales history graph screen, then click on **Create Production Order** under **Production** in the main menu:



This will produce the following screen:

Production Order: Create

Tenant: 2023 - Student Competition
Scenario: 100 - Arborcrest Basic
Team 1
Run: 11 - Test Run 1
User: Student-01
Joe Smith
Simulation Time: 01/01/2024 12:00:00 AM

← Back Refresh Open Window

Material: AliCatCS12 - AliCat Ale 12oz bottle case ▾

Quantity: 1240 Unit of Measure: CS ▾ Plant: 100 - Brewery ▾ BOM: 100 - Basic BOM ▾ Routing: 100 - AliCat Basic Routing ▾

01/01/2024 📅

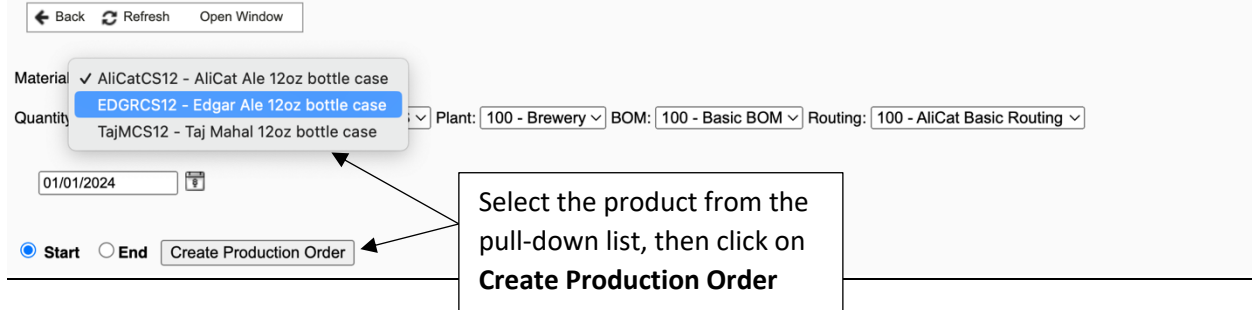
Start End Create Production Order

Production Orders									
Order Number	Material_Number	Mat'l Description	Plant	Routing	Start Date	Quantity	Q Complete	UofM	Actions
Search...	▾	▾	Search...	Search...	Search...	Search...	Search...	Search...	Search...

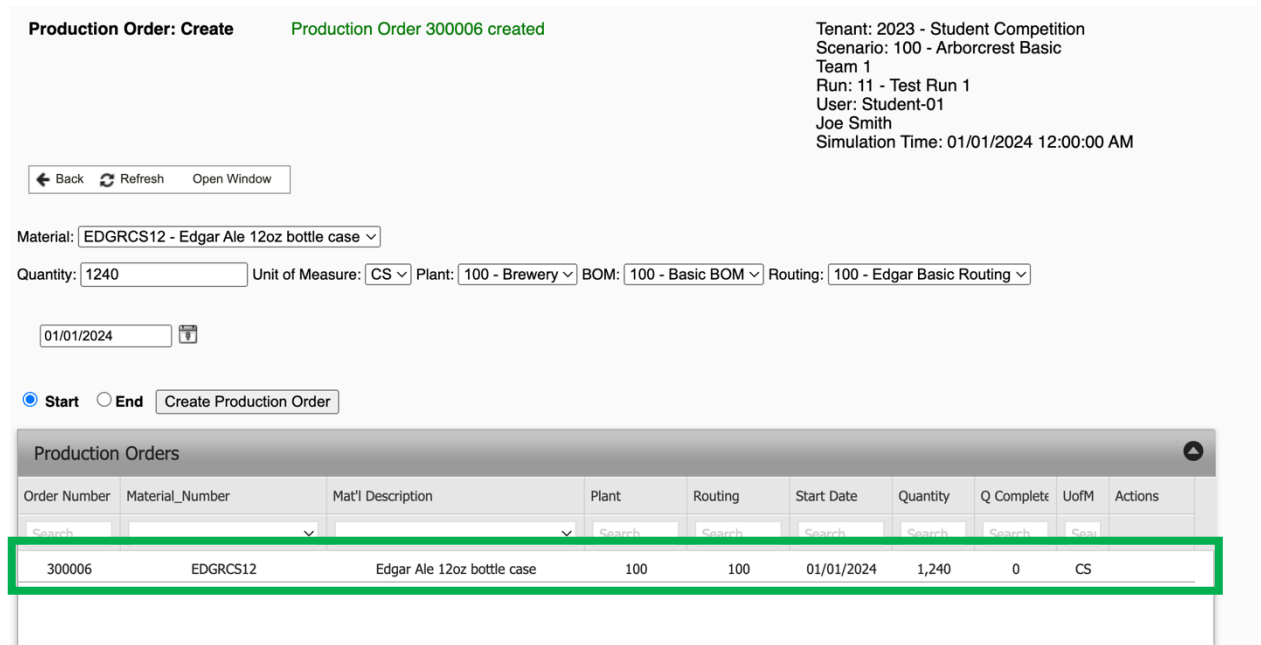
To create a production order, select the product from the drop-down list, then click **Create Production Order**. **Do not change anything else on the screen.**

Production Order: Create

Tenant: 2023 - Student Competition
Scenario: 100 - Arborcrest Basic
Team 1
Run: 11 - Test Run 1
User: Student-01
Joe Smith
Simulation Time: 01/01/2024 12:00:00 AM



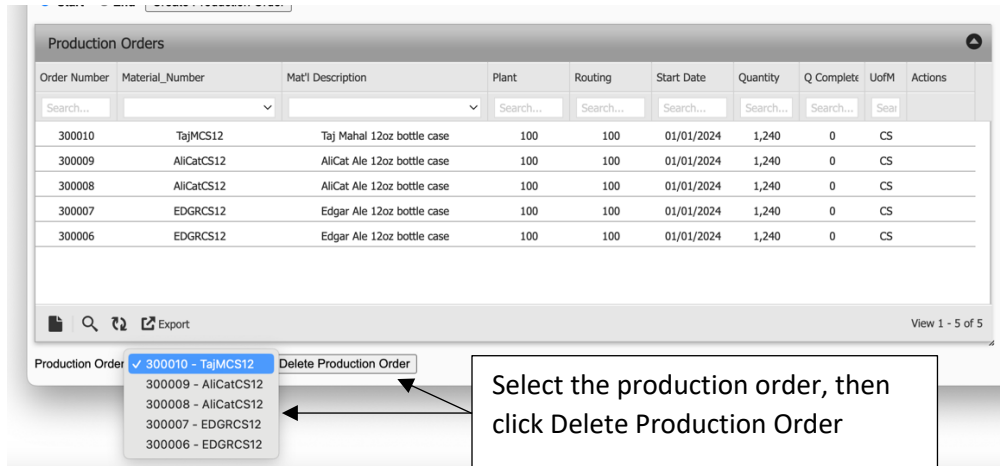
The production order will be listed in the table:



Notes:

- A. You will want to create production orders in groups of four as there are four fermenters.
- B. There is enough inventory of each product to meet the demand for approximately **1 ½ months**, so it is not critical **what** you make in the very beginning as long as you are making something. One good production option is:
 - a. Two orders of AliCat
 - b. One order of Edgar
 - c. One order of Taj Mahal
- C. Orders take 14 days to ferment and 1 day for bottling.
- D. Before the 14 days is complete, you want to have four more orders in the **Workcenter Queue** waiting to start. The **Workcenter Queue** is discussed in the next section.

- If a production order is created by accident, you can delete it using the pull-down list at the bottom of the screen:

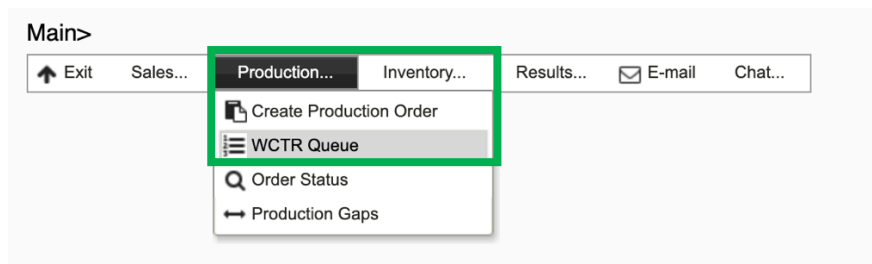


Important: Do not delete a production order that is in process. You will be throwing away all of the ingredients for a batch of beer, which will be costly! You can see if an order is in process using the Workcenter Queue.

Workcenter Queue

The first rule of success in the simulation is that "You must make stuff to make money." As you are short on capacity, any gaps in production are extremely costly. The Workcenter Queue is where you monitor the status of your production orders.

- Open a new window and select "WCTR Queue" from the production menu:



Production orders do not show up on the Workcenter Queue until time starts advancing in the simulation:

WCTR Queue: Status

Tenant: 2023 - Student Competition
Scenario: 100 - Arborcrest Basic
Team 1
Run: 11 - Test Run 1
User: Student-01
Joe Smith
Simulation Time: 01/01/2024 12:00:00 AM

← Back Refresh Open Window

Production Orders											
WCTR	Workcenter	Seq	Op	Stage	Order Type	Prod Ord	Lot	Material	Description	Quantity	Time Remain
▼	Search...	Search	Search	Search	Search...	Search...	Search...	▼	Search...	Search..	Search...
No records to view											

Once the simulation starts, click on Refresh (Refresh):

WCTR Queue: Status

Tenant: 2023 - Student Competition
Scenario: 100 - Arborcrest Basic
Team 1
Run: 11 - Test Run 1
User: Student-01
Joe Smith
Simulation Time: 01/01/2024 12:00:00 AM

← Back Refresh Open Window

Production Orders											
WCTR	Workcenter	Seq	Op	Stage	Order Type	Prod Ord	Lot	Material	Description	Quantity	Time Remain
▼	Search...	Search	Search	Search	Search...	Search...	Search...	▼	Search...	Search..	Search...
No records to view											

Click on Refresh

The status of all production orders will show in the screen:

WCTR	Workcenter	Seq	Op	Stage	Order Type	Prod Ord	Lot	Material	Description	Quantity	Time Remain
	Search...	Search	Search	Search	Search...	Search...	Search...		Search...	Search..	Search...
601	Fermenter #1	0	20	20	Run	300006	500000	EDGRCS12	Edgar Ale 12oz bottl...	1,240	13 days 00 hrs 00 min 00 sec
602	Fermenter #2	0	20	20	Run	300007	500001	EDGRCS12	Edgar Ale 12oz bottl...	1,240	13 days 00 hrs 00 min 00 sec
603	Fermenter #3	0	20	20	Run	300008	500002	AliCatCS12	AliCat Ale 12oz bottl...	1,240	13 days 00 hrs 00 min 00 sec
604	Fermenter #4	0	20	20	Run	300009	500003	AliCatCS12	AliCat Ale 12oz bottl...	1,240	13 days 00 hrs 00 min 00 sec
601	Fermenter #1	1	20	20	Run	300010	500004	TajMCS12	Taj Mahal 12oz bottl...	1,240	14 days 00 hrs 00 min 00 sec
602	Fermenter #2	1	20	20	Run	300011	500005	AliCatCS12	AliCat Ale 12oz bottl...	1,240	14 days 00 hrs 00 min 00 sec
603	Fermenter #3	1				00006					00 min 00 sec
604	Fermenter #4	1				00007					00 min 00 sec

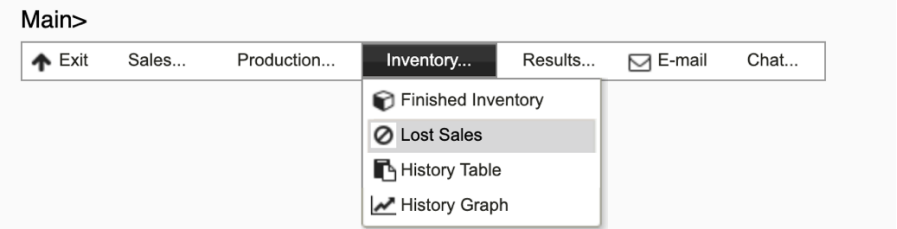
Orders with Sequence Number (Seq) zero are in production and should not be deleted.

Fermentation will be complete after 13 days. After one more day for bottling, they will be in inventory available for sale.

Note: You should have between 8 and 12 production orders in the workcenter queue at all times. Fewer than 8 orders risks having a gap in production, which is very costly when demand exceeds capacity. More than 12 orders means you have made production decisions too far into the future and won't be able to respond quickly enough when inventory of a product is low, risking an unneeded stockout.

Inventory

1. Select **Lost Sales** from the inventory drop-down menu:



This will produce the following screen:

Lost Sales: Status

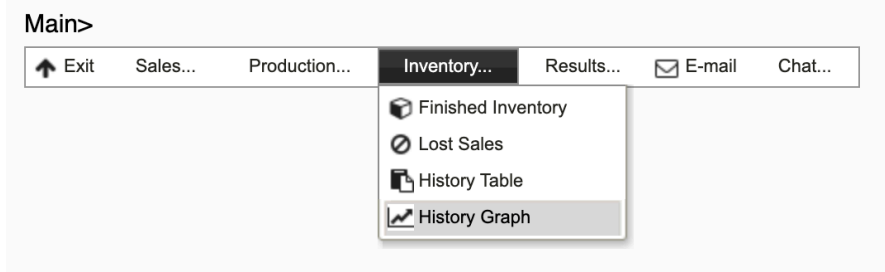
Tenant: 2023 - Student Competition
Scenario: 100 - Arborcrest Basic
Team 1
Run: 11 - Test Run 1
User: Student-01
Joe Smith
Simulation Time: 01/02/2024 12:00:00 AM

← Back Refresh Open Window

Lost Sales					
Description	Material_Number	Quantity	U of M	SLoc	Date
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
No records to view					

- You will have lost sales once the simulation is in the summer months as demand will exceed capacity.
- You **do not** want to see **Taj Mahal** on this list as it has the highest gross margin. Ideally, **only** want to see **Edgar Ale** on this list as it has the lowest gross margin.

2. Select the **History Graph** from the inventory drop-down menu:



- As the simulation advances, this graph will show how inventory is changing over time. The inventory increases when production orders are received and decreases when sales are made.
- **This window is critical to understanding your inventory position to determine what products to produce next.**

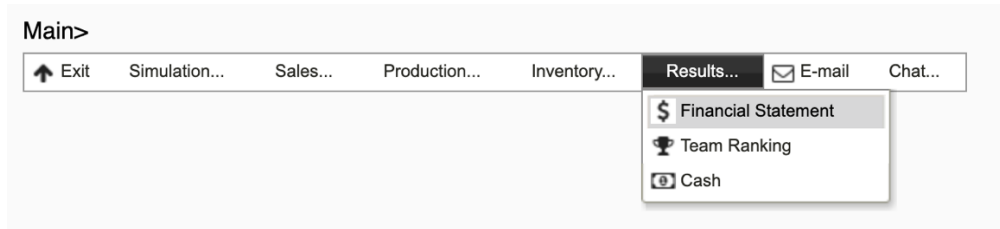
Inventory: History Graph

Tenant: 2023 - Student Competition
Scenario: 100 - Arborcrest Basic
Team 1
Run: 11 - Test Run 1
User: Student-01
Joe Smith
Simulation Time: 01/16/2024 12:00:00 AM



Results

1. Select “Financial Statement” from the Results drop-down menu:

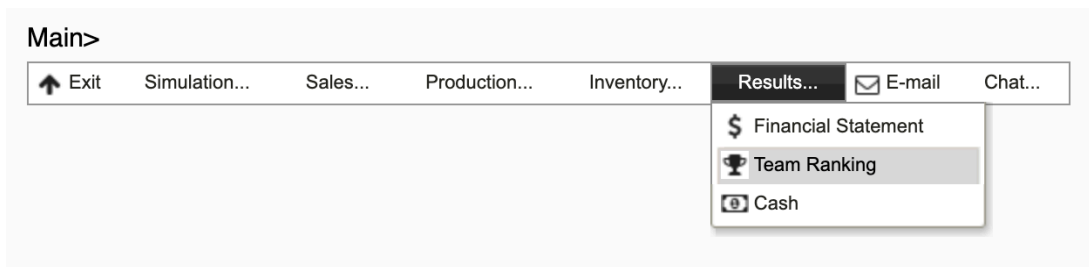


2. This will show the company’s income statement and balance sheet:

Name	Acct/Cat	Current	Dr./Cr.
Financial Statements	-	-	-
Income Statement	-	28,972	-
Gross Profit	1010	211,007	-
Expenses	1020	182,035	-
Balance Sheet	-	0	-
Assets	2010	3,732,758	-
Liabilities	2020	1,585,017	-
Owner's Equity	2030	2,147,741	-

Earnings Before Tax (EBT), which you want to maximize.

3. Select **Team Ranking** from the results drop-down menu:



This screen lists the teams in order of Earnings Before Tax (EBT). Your goal is to be at the top of this list when the simulation ends.

Team	Simulation Time	EBT
1	01/01/2025 00:00:00	\$140,135.21
2	01/01/2025 00:00:00	\$125,650.23
5	01/01/2025 00:00:00	\$113,650.38
4	01/01/2025 00:00:00	\$110,352.44
3	01/01/2025 00:00:00	\$110,240.11
7	01/01/2025 00:00:00	\$102,597.35
6	01/01/2025 00:00:00	\$98,348.51
8	01/01/2025 00:00:00	\$73,256.37
9	01/01/2025 00:00:00	\$73,028.70
20	01/01/2025 00:00:00	-\$945,809.75

Conclusion

The simulation will run for one simulated year, and you will not be able to keep every product in stock. Maintaining sales of **Taj Mahal** is important since it makes the most profit. You want to make sure when you lose sales it is of **Edgar Ale**, since it makes the least profit per case. You very likely will stock out of **AliCat** as well.

Make sure to work with your teammate to make the most effective business decisions. You need to make decisions together and run the simulation like a real company. Remember, “You have to make stuff to make money!”

Good luck!