



**Team Project ADM 3301 M**  
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## **Part A- Introduction:**

Born from humble beginnings in the heart of Canada's capital city, Skyewear has emerged to become one of Ottawa's premier street wear boutiques. Two brothers, Mohammed and Hussein Najem, established the company in 2010. Both brothers did not have any experience in this field prior to entering the market; therefore it was a risky venture that required a lot of time and effort to undertake. Skyewear opened its doors with a mission to bring sneaker and streetwear culture to a city with a burgeoning urban scene. Throughout the years, the brand grew within the Ottawa/Gatineau area, however; due to its prime location on Rideau Street, they have experienced fierce competition. Skyewear has answered its competitors by providing popular brands, unique clothing styles, and fashionable street wear, all at an affordable price. Housing a comprehensive collection of hand-picked gems and exclusive releases, as well as a fashion leading extensive apparel product line for both men and women.

The main goal of Skyewear was to build a profitable family business and gain market share that can not only sustain the business, but also allow them to expand and create franchises throughout the city. The store had a steady growth since its establishment, and both owners constructed their management skills in order to efficiently maintain its operations.

In this project, our group is going to take a look at the issues surrounding the operations management of Skyewear. We will examine and analyze a few key problems surrounding the inventory management of the store. As a retailer, inventory management is an important operation towards the store, as it relies on sales to generate profits. If inventories levels are not properly managed, the store's profitability and operations are at a great risk. Through the issues of inventory management, we will apply several topics of operations management that have been

taught in lectures, including deterministic models for inventory management. Before we delve into the analysis section, a brief introduction of the company and the strengths, weaknesses, opportunities, and threats (SWOT) analysis is needed to obtain a greater understand of the store's current situation.

### **SWOT Analysis:**

It is critical for an organization to conduct a SWOT analysis in order to not only scrutinise the strengths, weaknesses, but also pinpoint the opportunities and threats that exist. The analysis provides clear insight on what approach to take in accomplishing its organizational goals. Building on strengths and reducing weaknesses will create a profitable business that can seize its opportunities with the income being generated.

Throughout their few years in business, Skyewear has made it their goal to become Ottawa's premier establishment for urban clothing. Having a goal alone however, is not enough to achieve it; therefore Skyewear has taken some key steps to find strength in pursuit of their objectives.

A key success factor for Skyewear lies within its location. The store is located in the heart of downtown, on Rideau Street and across from the Rideau Shopping Center. The streets here are bustle with teenagers and young adults. The location accommodates various forms of public transit to reach Skyewear's target market and provides their consumers with the ease of access to their central location.

Another strong suit and core competency that Skyewear exhibits is their exclusive rights to carry Canadian brands such as Classique, Superb, and Nikeloas. With newly emerging urban retailers around the city, Skyewear stands apart from the rest by being the only carrier of these

popular Canadian brands. This leverage allows the store to hold a monopoly for these brands within the city, and provides them with a price advantage, allowing the store to mark up brands due to a lack of competition for such apparel.

Weaknesses focus on areas business' can improve upon so they can maximize their operations, and like all companies, Skyewear has some of their own. The clothing industry can be very competitive. Due to Skyewear's prime location on Rideau Street, one major weakness Skyewear faces is the increasing number of urban retailers entering the industry. This increase in competition makes it difficult for Skyewear to maintain their position in the market by continuing to stay relevant. As a result, Skyewear has to distinguish and separate itself from the rest of the competition, they have done so by carrying exclusive Canadian brands (Classique, Superb, Nikeloas).

As a small business built from the ground up, Skyewear faces financial restrictions that aren't applicable to many large companies. With such restrictions Skyewear limits the number of employees to assist in customer service. In addition, Skyewear has a very inadequate online presence. By developing a stronger online presence, customers can make orders throughout Canada which will help Skyewear enhance their profit and identity.

There are plenty of opportunities for Skyewear to gain leverage and improve its business operations. This section will highlight the opportunities Skyewear can take advantage of in order to gain market share and improve economically.

The expansion of Rideau mall creates a great incentive for expansion or relocation. The revamped mall will attract more shoppers, which creates a great opportunity for the small store to

rebrand as a larger boutique. Expansion of the store by relocating to a bigger location will help in allocating more inventory space, also providing space to set up a women clothing section that will help target a new demographic. Other clothing vendors in the area have bigger stores with a variety of products to choose from, and the expansion of the store will not only help Skyewear keep up with the competition, but also in gaining new customers.

Skyewear may also expand its market share by targeting online shoppers. Developing a website that caters to the tech savvy generation can help generate income with lower costs. Eliminating costs such as sales representatives wages can help Skyewear boost its productivity, and expand their reach to clients beyond the downtown area and city limits.

The threats section of the analysis deals with the external environment that Skyewear is usually unable to control, because this is what other competitors have been offering. These threats include: changes in fashion trends, numerous competitors in the area, and changes in consumer purchasing trends.

First we will address the changes in fashion trends and how they pose a threat to Skyewear. Skyewear is an urban clothing company that is relatively one dimensional in terms of the clothing and accessories they sell, evidenced by the fact they refer to themselves as “Ottawa’s premier Street-wear Shop”. While specializing in one style has benefits of its own the threats that it presents are substantial and should be a concern for Skyewear. The fashion industry is very innovative as styles are constantly being created and revamped, the fact that Skyewear is specifically focused on urban clothing could prove to be detrimental if urban clothing begins to go out of style.

Additionally the strong competition presence in the area is a threat to Skyewear. NRML

clothing, Rideau Shopping Centre, and Trend City are urban clothing retailers in the vicinity of Skyewear and have the potential to reduce their market share.

Lastly, the changing consumer trend in terms of purchasing clothing online also poses a threat to Skyewear. Skyewear has a very weak online presence that hasn't been fully implemented. "Show rooming", which has become a very common practice in terms of clothing retailers is when the customers view the items in the store so they can go purchase it online. With their lack of any online presence Skyewear is at a disadvantage to their main competitor, NRML, which has a very strong online presence.

The SWOT analysis addresses the joint strengths, weaknesses, opportunities, and threats that Skyewear faces in today's emerging markets. The key to success and to become a major competitor in the market, Skyewear must carry on building on its strengths and opportunities, while eliminating or reducing its threats and weaknesses.

### **Part B- Analysis of Defined Problems:**

#### **Forecasting – Excess Inventory:**

In order for Skyewear to increase their operational efficiency and to increase their profit margins it is beneficial for them to forecast the amount of excess inventory that they will have. Throughout the ADM 3301 course, we have been introduced to two primary types of forecasting models: quantitative and qualitative methods. Quantitative forecasting "involves mathematical techniques and is used when a situation is "stable" and historical data is present". Qualitative forecasting "involves intuition and experience and is used when a situation is vague and little data exists". For the purpose of our report on Skyewear we will only be taking into consideration

quantitative forecast methods. Also, the time horizon for the forecasts involved is medium range, lasting between three months to three years, being particularly useful in sales planning, production planning, budgeting, and analysis of various operating plans.

In order to accurately forecast the amount of excess inventory we have provided the excess inventory figures in Appendix 1. We have also included a graph in Appendix 1 of the excess inventory figures by seasons. It is apparent through the graph that there is not only a trend component present but also a seasonal component. This conclusion is in-line with the notion of clothing retailers having peak and valley seasons. Our data provided in our appendices show that the overall trend of the excess inventory is upward while the respective peaks occur in high shopping periods (Winter and Spring). These two peaks can be further explained by providing reasoning for the peak seasons in the industry. High peaks are shown during the Winter season in the retail industry because of anticipation for Christmas shopping and the vacation that many people are provided during that time of year. Spring is also a peak season in the clothing retail industry due to the anticipation of summer and new styles and fashions being rolled out after the Winter season has passed.

Excess inventory has been deemed as an issue for Skyewear because the demand for their products has considerably died down since their inception. Management's complacency in maintaining the status quo: the naïve approach has resulted in an inefficient ordering process and has exposed inefficiency. Therefore, we have decided to use the Multiplicative Decomposition model to forecast the amount of excess inventory, as the other forecasting models require some combination of trend/seasonality/no trend/ or no seasonality.

In respects to the first chart in Appendix 1, the detailed calculations used in the Multiplicative Decomposition model excess inventory are displayed. Prior to forecasting, there are certain factors that needed to be considered upon when selecting the most appropriate forecasting model, one of these being: the time horizon. Due to the fact that the forecast data is provided for 36 months, our time horizon should be a medium range forecast since they span from anywhere from 3 months to 3 years. After the completion of each forecasting model, we will use the data provided to choose which model is the optimal solution to determining the excess inventory.

To determine which approach is the most effective in terms of forecasting the excess inventory, the mean absolute deviation (MAD) and the mean squared error (MSE) must be taken into consideration. The forecasting method with the lowest MAD and MSE is considered the most appropriate model to use. However, it is important to note that since the data that has been presented has both a seasonal and trend component, only the multiplicative decomposition model can be applied. Nonetheless, we have included a chart that compares the Naïve approach (which is the status quo for Skyewear) and the Multiplicative Decomposition model approach and we have calculated the MSE and MAD for both methods.

The MAD and MSE for the Naïve approach were calculated to be 63.33 and 5158.33, respectively. The MAD and MSE for the Multiplicative approach were 21.27 and 638.72, respectively. The values for the Multiplicative approach were lower than the Naïve approach and therefore determined that this approach was more of an effective forecasting model for Skyewear. Additionally, we have calculated the Mean Absolute Percentage Error (MAPE) of the Multiplicative model and the figure is 6.02%. The MAPE is used to express error as a

percentage; therefore, having a MAPE of 6.02% states that on average our forecast will deviate from the actual figure by 6.02% (which is a relatively low figure). Although the Multiplicative forecast model is the only applicable model to the situation at hand, due our data that we have provided and the calculations made, we can conclude that this forecast provides an accurate representation for future values.

### **Inventory Management**

During our analysis of Skyewear's operations it came to our attention that the current inventory ordering process is inefficient and is causing the store to spend more capital than needed. Currently management is using the Naïve Approach to fill the inventory needs(Refer to Appendix 1). The Naïve Approach assumes that the demand in next period is the same as the previous one. This approach may have been useful when the store was initially founded, but it has proven to be counterproductive in the long run. While it was an effective approach initially, the establishment started carrying more exclusive brands at a premium cost to differentiate themselves; therefore with these new costs the Naïve Approach was not effectively addressing the seasonal changes in the trend of shopping habits. These additional costs resulted in lowered profit margins and in turn have exposed the inefficiency of Skyewear's inventory ordering process. In the clothing retail industry shopping trends change throughout the year. There are peak times throughout the year (Winter and Summer) where people tend to purchase more merchandise due to the holidays, and valleys (Spring and Fall) where sales slow down significantly.

We've constructed a solution that will help fulfill the inventory needs in a more economical way by correlating with customer's demand and focusing on the brand which adds value to the business. Economic Order Quantity (EOQ) model is a technique used to determine the best outcomes to match the quantity needed in each period. The premise of this model works on providing the optimal ordering size that will help yield the lowest inventory costs in an efficient manner. A series of assumptions are made with the EOQ model in order to solve Skyewears' problem:

1. Constant demand for the product
2. Constant Lead Time
3. The order is received all at once (All items)
4. The cost of all units ordered is the same (No Change in Price)
5. Ordering costs are known and constant (No change in price)
6. Demand rate certainty with respect to lead-time, we assume no shortage will occur since supply comes in when the product runs out.

After making the assumptions, we can calculate the economic order quantity that Skyewear needs to take into consideration. We chose to use the brand Nikelaos T-shirts, as they are the best selling items in the store, and yields the best overall profit margins. In the calculation of the current process we determined the cost of \$55,892.35 for the quantity of 200 pieces using the following formula:

$$Tc(Q) = \text{Material Cost} + \text{Ordering Cost} + \text{Holding Costs}$$

Referring to Appendix 2, we display the comparison between what management is using in their inventory management and what we are proposing in the EOQ model. The annual cost of 55,892.35 is due to the relatively small order of 200 units, which is reasonable for a small boutique such as Skyewear, were the inventory space is limited, and holding costs can become

relatively high if inventory ordering process is not statistically controlled. The information in Appendix 2 is based on an average annual demand of 3490 units, with the purchasing cost of \$15 per unit.

The key element in our approach is providing Skyewear's management with the optimal ordering quantity needed, and avoid the extreme fluctuation in ordering sequence they currently have. Using our EOQ model we determined the optimal volume of the order size of 299 units at a cost of \$55,759.78 using the following two formulas :

$$\text{(Quantity ) } Q^* = (\sqrt{2DS/h})$$

$$\text{(Total cost of Quantity) } Tc (Q^*) = DC + \sqrt{2DS}H$$

The quantity  $Q^*$  is the economical order quantity Skyewear needs to have in order to maintain an efficient business activities. D represents the annual demand, S indicates the ordering cost incurred on unit bases, and H is the holding costs per unit. In Figure 2 of Appendix 2 it shows how the calculations were done to get the economical quantity of 299 units which is 99 units more than the 200 units in the present process. Although the number of units is not extremely far away from the current process, for a small business such as Skyewear it can have a significant impact on reducing the overall orders made per year by 6 (refer to Appendix 2 ). The optimal number was calculated by dividing the annual demand (D) by the optimal order quantity size of 299. The calculation equalled to 17.45 which was rounded up to 18 to prevent inventory shortage of the product. This will help the issue of excess inventory by focusing business sales on the best selling brand with the greatest margins, therefore they can quantify the optimal order amount which will reduce excess inventory for the respective brand and lead to greater profit margins, making their business activities more efficient. Including our findings in the EOQ model we can

see that the order size increase is creating savings of \$132.57 annually (refer to appendix 2). Thus, it is in Skyewears' best interest to use this new ordering model in their business process, because it will prove more efficient and cost-effective, and help sustain their business activities in the long-run focusing on brands that add value to their business such as Nikelaos.

### **Part C- Summary and Final Words**

Throughout the duration of the operations management class, we were taught various topics on operations, such as forecasting, materials requirement planning, and inventory management, which could be applied to real world scenarios. Application of principles taught in the classroom to real life examples is crucial as it stimulates learning. For the purposes of this report, our group decided to investigate Skyewear boutique.

The retail industry is very competitive, especially in the heart of downtown Ottawa where Skyewear is located. With the newly renovated Rideau Mall down the street, ByWard market in its backyard, and a number of different apparel stores neighboring Skyewear, it is apparent that owners Mohammed and Hussein Najem must separate themselves from the competition. As a result, our group attempted to search for a solution that would provide Skyewear with an answer as to how it can continue to compete in this market like it has been since it first opened in 2010. The solution that we feel would be extremely valuable to Skyewear is to attempt to improve the economic order quantity, and by doing so finding the optimal order size. This would include changing the ordering process from the Naïve approach that Skyewear has in place.

Through the multiplicative decomposition model we learned that the naïve approach is inefficient in the long run because this inventory method can be modified. Our new approach more accurately forecasts the amount of excess inventory and therefore reduces our inventory holding costs and increases our profit margin. To solve this issue, we created an EOQ model to calculate the ordered quantity for Skyewear at the present and compared it to that which they already have. This takes into account the stores peak and valley seasons and uses this information to efficiently supply the store with sufficient inventory, while not overstocking it. We also received an understanding of the stores peak periods (Winter and Spring). This allows Skyewear to anticipate demand and use this knowledge to forecast accordingly.

Throughout our study of Skyewear there were mixed results when researching. Seeing how it is a small business, it was at times difficult to research information regarding the firms history. However, we found the SWOT analysis to be fairly easy once we found the history we desired through contacting the business. Another problem that we encountered was that it was difficult finding reliable sources outside the business for issues we could investigate. As a result, we were forced to base our key issues solely on the data we received as well as the information gathered through speaking with the owners. Our findings are based on that which was provided to us by the business as opposed to us being capable of discovering our own data through the web and other sources. Secondly, when we discussed suggesting opening an additional location we decided that at this time Skyewear is a small company with a limited amount of customers. As a result, it may not be economically feasible for them to open up an additional location until they minimize their excess inventory by anticipating demand. They must also provide a stronger

online presence, which could open up their store to buyers across the country. Furthermore, by doing this Skyewear will open doors for themselves in the future.

This group project allowed us to analyse the principles and theories that were taught in class in depth, and as well on how to apply such concepts to an existing business and help shed light to issues that may not been realised by its management. The outcome is that we now have a good understanding of how topics taught in the operations management class apply in real life situations, and be of use for us in future career paths.

#### **Part D- Recommendations:**

Skyewear uses its exclusive urban brands as an attempt to attain customers and to maximize profit. Due to the exclusivity of brands such as Classique, Superb, and Nikeloas, Skyewear is able to attract consumers and fill the need for this niche market. Skyewear's location in the heart of downtown Ottawa helps make it more accessible to consumers from all around the city, but depending on the prime location is not sufficient to maintain a strong market share nor a competitive advantage. Skyewear needs to improve its operations and develop methods that can reduce costs and increase attraction to their location, especially the inventory management process, because of its small size and limited inventory holding capacity. We are providing management with suggestions that if implemented, it will result in beneficial outputs, for there is always room to improve the business's activities.

1. Determining a solution to minimize the amount of excess inventory. This is an efficiency issue that needs to be addressed. Excess inventory has the potential to be misplaced; therefore reducing the profits that can be made from their sales wasting the costs charged

such as holding. Also since we are dealing with the fast changing fashion industry the products may go out of style quickly, therefore reducing the value of the merchandise.

2. We can minimize the excess inventory by using the economic order quantity method (EOQ) to determine the optimal order size and the quantity of orders needed in order to minimize ordering costs, Skyewear could save \$132.57 annually (calculated in part B).
3. A much needed introduction of an online and social media presence. Skyewear faces stiff competition with other urban clothing retailers. Skyewear differentiates themselves with their exclusive brands, but they need to diversify their methods of reaching a larger target market. In this day and age, many consumers, especially the youth, are tech savvy and voice a lot of their shopping needs through social media and the internet. Skyewear needs to increase their presence and strengthen the user friendliness and ease of accessibility on their webpage. They also need to be active in social networks such as Facebook and Instagram, to advertise and catalogue their newest items, while keeping their consumers up to date with the constant changes and updates with the store. This method will bombard their consumers with constant attention towards their store and name brands, and will help spread the word on the availability of the products in Skyewear.
4. Finally we recommend that management reduce spending on brands that do not add value to the business. Eliminating purchases of merchandise that is not being sold, or have low contribution margins compared to other brands will help shift allocation of funds to the profit making brands such as Nikelaos. We can also eliminate the order cost, holding

costs and other miscellaneous costs that may occur from purchasing other brands that do no help support the bottom line.

The recommendations stated above are possible measures Skyewear should consider to increase profitability and efficiency.

## Part E- Appendices

### Appendix 1:

Season	Year	Period	Excess Inventory	MA	CMA	Excess/CMA	SI	Adj SI	Des. Excess	Trend	Forecast	Error	Abs. Error	Squared	%Error
Winter	2012	1	100				0.8981	0.91	110.28	181.09	148.07				
Spring	2012	2	250	171.25			1.1458	1.18	216.13	172.58	199.60	50.40	50.40	2539.94	20.16%
Summer	2012	3	150	198.25	183.75	0.818328531	0.9098	0.92	183.33	184.04	189.02	-19.02	19.02	361.70	12.68%
Fall	2012	4	185	202.5	199.375	0.927899687	1.0084	1.02	181.70	195.52	199.08	-14.08	14.08	197.78	7.60%
Winter	2013	5	200	221.25	211.875	0.943952802	0.8981	0.91	220.58	206.99	187.70	12.30	12.30	151.28	6.15%
Spring	2013	6	275	245	233.125	1.179824885	1.1458	1.16	237.75	218.47	252.71	22.29	22.29	497.05	8.11%
Summer	2013	7	225	250	247.5	0.909090909	0.9098	0.92	245.00	229.95	211.18	13.82	13.82	190.97	6.14%
Fall	2013	8	280	258.25	253.125	1.10817284	1.0084	1.02	275.01	241.43	245.81	34.19	34.19	1169.25	12.21%
Winter	2014	9	220	280	258.125	0.852300242	0.8981	0.91	242.81	252.90	229.33	-9.33	9.33	87.08	4.24%
Spring	2014	10	300	280	280	1.183848154	1.1458	1.09	275.58	284.38	287.83	12.17	12.17	148.20	4.06%
Summer	2014	11	240	285	272.5	0.880733945	0.9098	0.92	262.09	275.88	252.81	-12.61	12.61	159.04	5.25%
Fall	2014	12	280	280	282.5	0.991150442	1.0084	0.99	282.87	287.34	284.82	-4.62	4.62	21.39	1.65%
Spring	2015	13	320	300	290	1.103448276	1.1458	1.16	278.85	298.81	345.64	-25.64	25.64	657.19	8.01%
Summer	2015	14		320	310	1.032258085	0.9098	0.97							
Fall	2015	15					1.0084	1.08							
Winter	2015	16					0.8981	1.00							

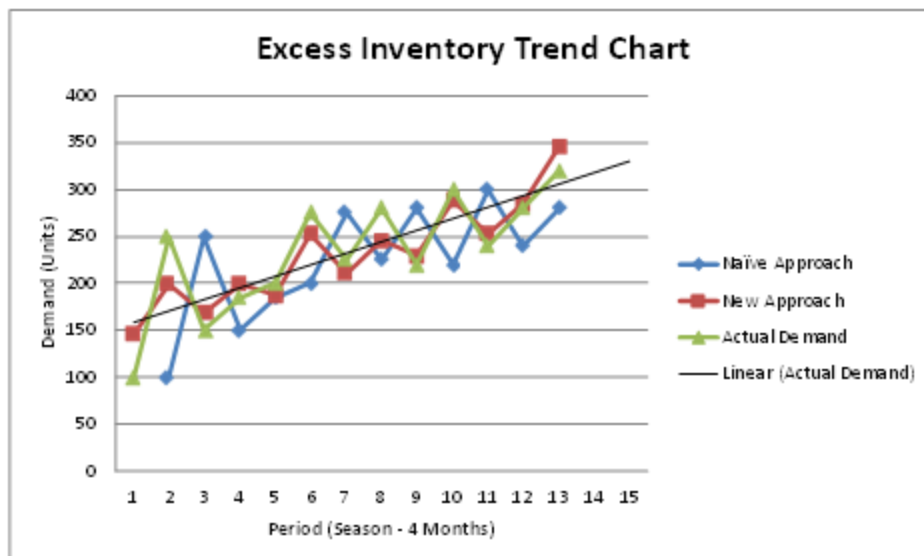
Totals: 98.27%  
MAD: 19.21  
MSE: 515.07  
MAPE: 6.02%

Period	Excess Inventory	Naïve	Error	Absolute Error	Error <sup>2</sup>
1	100	100			
2	250	100	150	150	22500
3	150	250	-100	100	10000
4	185	150	35	35	1225
5	200	185	15	15	225
6	275	200	75	75	5625
7	225	275	-50	50	2500
8	280	225	55	55	3025
9	220	280	-60	60	3600
10	300	220	80	80	6400
11	240	300	-60	60	3600
12	280	240	40	40	1600
13	320	280	40	40	1600

MAD: 63.3333  
MSE: 5158.33

Period	Excess Inventory	Forecast	Error	Absolute Error	Error <sup>2</sup>
1	100	148.07	-48.07	48.07	2122.53
2	250	199.60	50.40	50.40	2539.94
3	150	189.02	-19.02	19.02	361.70
4	185	199.08	-14.08	14.08	197.78
5	200	187.70	12.30	12.30	151.28
6	275	252.71	22.29	22.29	497.05
7	225	211.18	13.82	13.82	190.97
8	280	245.81	34.19	34.19	1169.25
9	220	229.33	-9.33	9.33	87.08
10	300	287.83	12.17	12.17	148.20
11	240	252.81	-12.61	12.61	159.04
12	280	284.82	-4.62	4.62	21.39
13	320	345.64	-25.64	25.64	657.19

MAD: 21.27  
MSE: 638.72



Appendix 2:

	2012	2013	2014
January	300	350	240
February	290	294	288
March	190	200	186
April	250	256	223
May	288	300	290
June	345	333	280
July	380	360	334
August	300	293	300
September	233	200	255
October	278	240	290
November	320	300	345
December	380	360	400
<b>Annual Demand</b>	<b>3554</b>	<b>3486</b>	<b>3431</b>

Brand	Purchase Cost
Nikelaos	\$15

Average Annual Demand
3490

Present Ordering Process	
Nikelaos Cost Per unit	\$15
Time Between Orders	2 weeks
Annual Demand	3490
Size of Order	200
Delivery Lead Time	1 week
Orders Per Year	18
Order Cost	\$23

$$Tc(200) = (3490 \cdot 15) + [(3490/200) \cdot 23] + [(3490/2) \cdot (.12 \cdot 15)] = \$55,892.35$$

Inventory Management	
Inputs	
Nikelaos Cost Per unit ( C )	\$15
Annual Demand (D)	3490
Ordering Cost (S)	\$23
Holding Cost/unit/Year (H)	12% Of price Per Unit
Delivery Lead Time (L)	1 week
Average Daily Demand	9.561643836
Orders Per Year	12
Economic Order Quantity (EOQ)	
<b>EOQ = Square root (2*3490*23)/(.12*15) = 298.64= 299 Units</b>	
<b>TC (299) = (3490 *15) + (3490/298.64*23) + (3490/2 * (.12*15))= \$ 55,759.78</b>	
outputs	
<b>EOQ</b>	299 units
<b>Total Cost (EOQ)</b>	55,759.78

## **Bibliography:**

- (1) Heizer, J., Render, B., & Griffin, P. (2014). *Operations Management* (Canadian Edition ed.). New Jersey, U.S.: Pearson Education.
- (2) Najem, M., Najem, H., (2015). Skyewear Boutique. Ottawa, ON, Canada
- (3) Class lecture slides provided by Professor Amir Khataie was consulted, but not explicitly sourced.

## Personal Ethics Statement Concerning Telfer School Assignments

### Group Assignment:

By signing this Statement, I am attesting to the fact that I have reviewed not only my own work, but the work of my colleagues, in its entirety.

I attest to the fact that my own work in this project meets all of the rules of quotation and referencing in use at the Telfer School of Management at the University of Ottawa, as well as adheres to the fraud policies as outlined in the Academic Regulations in the University's Undergraduate Studies Calendar. Academic Fraud Webpage

To the best of my knowledge, I also believe that each of my group colleagues has also met the rules of quotation and referencing aforementioned in this Statement.

I understand that if my group assignment is submitted without a signed copy of this Personal Ethics Statement from each group member, it will be interpreted by the Telfer School that the missing student(s) signature is confirmation of non-participation of the aforementioned student(s) in the required work.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Last Name( print)

\_\_\_\_\_  
First Name Student Number

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Last Name( print)

\_\_\_\_\_  
First Name Student Number

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

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Last Name( print)

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First Name Student Number

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Signature

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Last Name( print)

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Signature

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Last Name( print)

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Date

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First Name Student Number

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Date

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First Name Student Number