

-GROUP 2-

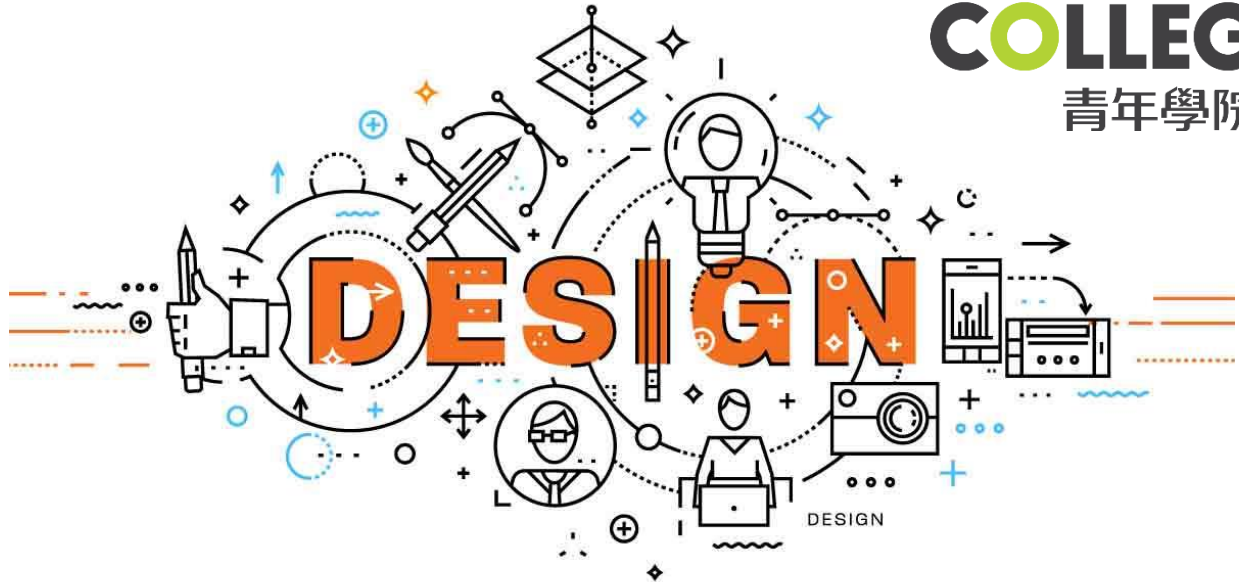
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The Final Report

Module Code: VWC 3026

Project Topic: *Design a stylish Watch (Live Fully)*



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Date of submission: _____

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1. Background

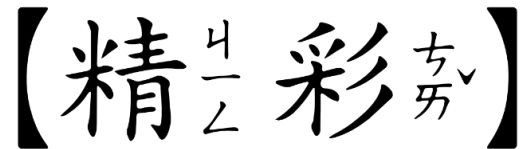
The Hong Kong Watch & Clock Design Competition aims to enhance the design quality of Hong Kong watch and clock, and to promote the development of the watch industry in Hong Kong.

As the students of Youth Collage, we are going to design a unique watch and participate in the competition.

2. Objectives

In order to showcase our watch design, we are going to participate in the Watch & Clock Design Competition. Also, we will design and produce a unique watch specially for the event.

Theme of Design : Live Fully (活出精彩)



Awake yourself with the most precious moments and demonstrate on your design with the idea of living fully.

3. Methodology

3.1 Implementation Research

First, we researched into 3 different types of watches and did a comparative analysis of them. Second, we drew sketches of 3 different design by hand and discussed the advantages and disadvantages. Lastly, we made a 3D model of the chosen design and created 3D Printing.




4. Findings / Production Process

4.1 Findings of Market Research




We did some research on 3 related products in the market at the moment. The key features of each product can be found in the tables below.

Name of product	AQUA TERRA 150m Quartz 28 mm	TISSOT T-RACE Chronograph	Classicist Quartz Leather Watch
Brands			
Features	Diamonds	Scratch-resistant	Rectangular
	White dial	Black dial	Silver white dial
		Black strap	Brown strap
		sapphire crystal	
Specification	Diameter: 28mm	Diameter: 43mm	Diameter: 30x44mm
	Bracelet steel	Silicone strap	Mineral Glass Strap
	Case: Steel	Swiss quartz	Thickness: 7.6 mm
	Between lugs: 14 mm		width: 22mm
	Water resistant: 15 bar	Water resistant: 10 bar	Water resistant: 3 ATM

	Crystal: Domed scratch-resistant sapphire crystal with anti-reflective treatment on both sides	316L stainless steel case with black and rose gold PVD coating	material: leather
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Photo			
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Watches

Brands			
Price	HKD \$32,400	HKD \$5,150	HKD \$1,106
Size	28mm	47.6x43x12.3mm	30x44x7.6mm
Weights	N/A	110g	N/A

Functions

Water Resistant	○	○	○
3 Hands	×	○	○
Chronograph	×	○	×

4.2 Results of Customer Survey

To find out what customers look for in a watch design, we conducted a customer survey (*Appendix 1*) in the Hong Kong Watch Clock Fair from 8 to 12 September 2021, we distributed 100 questionnaires and the results are summarized below.

Diagram 1: Age distribution

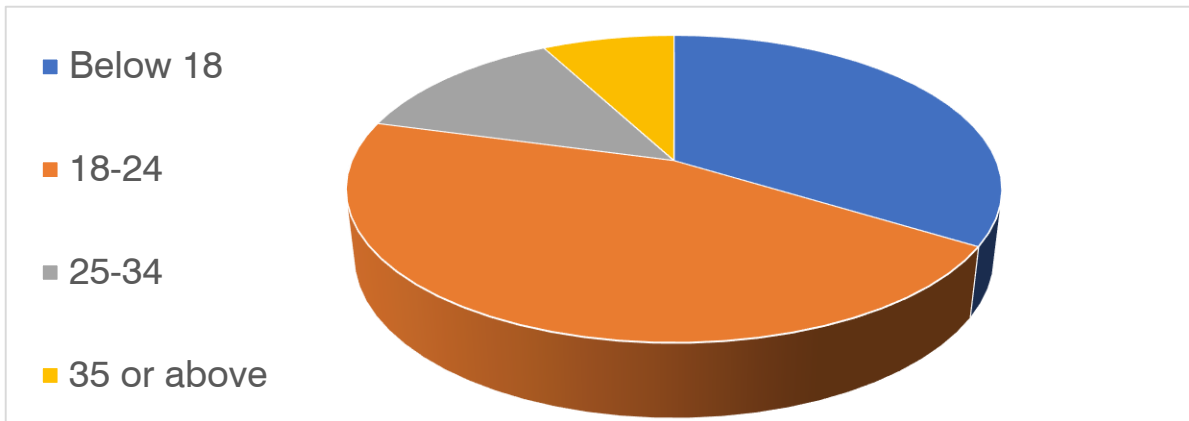


Diagram 2: Gender of the respondents

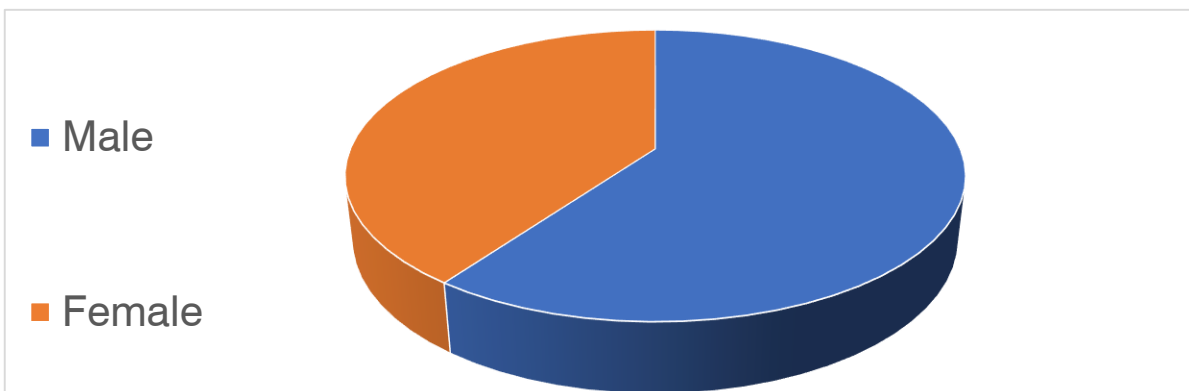
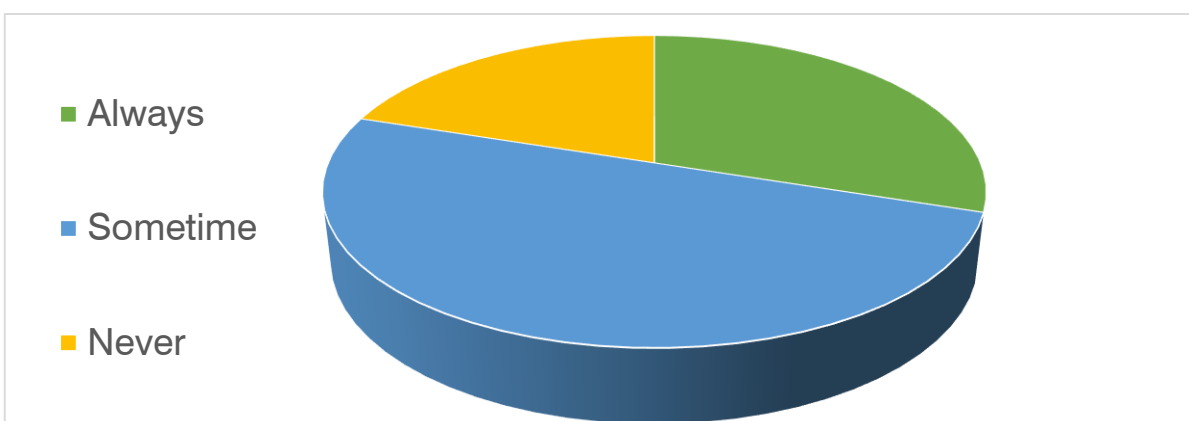


Diagram 3: How often do you wear your watch



5. Discussion

5.1 Target Customers

The target customer are teenagers aged **between 17 and 35**. These customers usually look for watches that are trendy, good value for money and eco-friendly. The final product will be sold at all major watch retailers and online shop.

5.2 Product Specification

The specifications of the final product are suggested as follows:

Specifications

Product Type	Quartz movement	<i>Feature</i>
Strap Material	High tensile silicone	Round
Case Diameter	42mm	Clear Case
Case Thickness	10mm	Multi-Dial
Water Resistant	3 ATM	No hands

5.3 Required Resources

To produce the watch, we need the following resources:

Software – Solidworks

3D Printer – Objet 30/24, Formlabs



 **SOLIDWORKS**

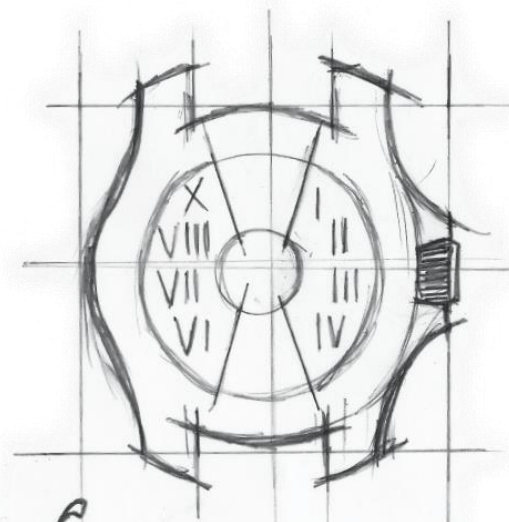
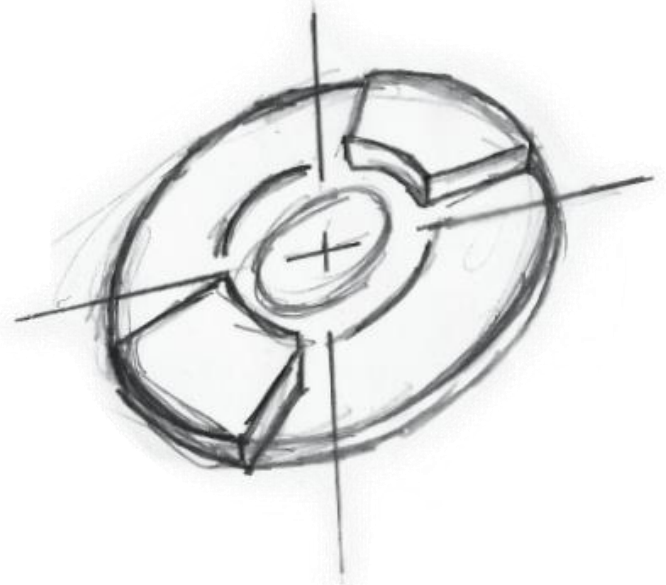
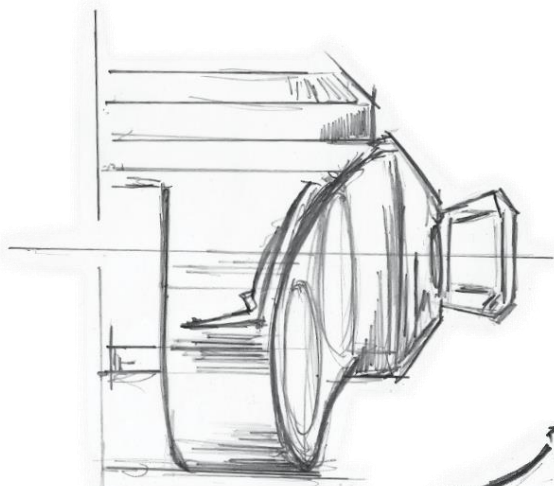


5.4 Outcomes

i) Sketch Designs

Based on the finding of the market research, results of the customer survey and the analysis of customer' needs, our group has come up with the following sketches of the watch design.

Diagram: Proposed watch design



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The RE. Under

Since 2021

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Life is strange
World is wonderful

/jīng cǎi/
【精彩】

Jīng

Cǎi

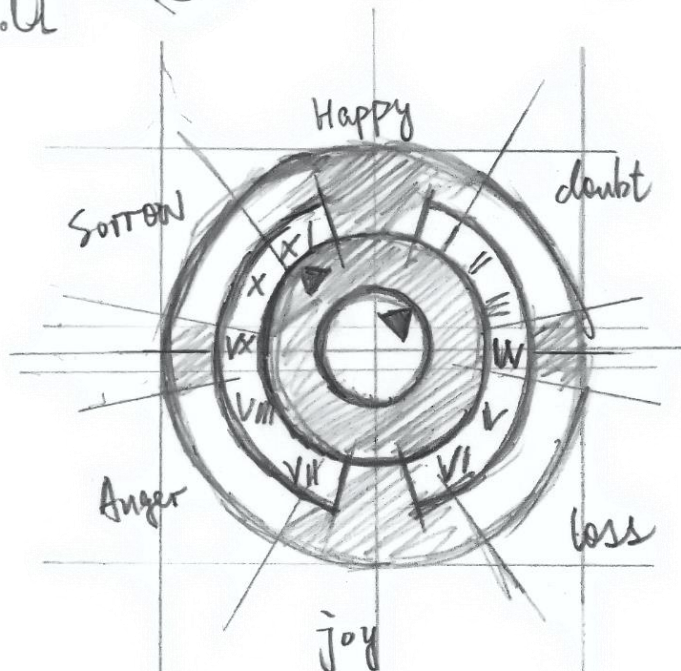
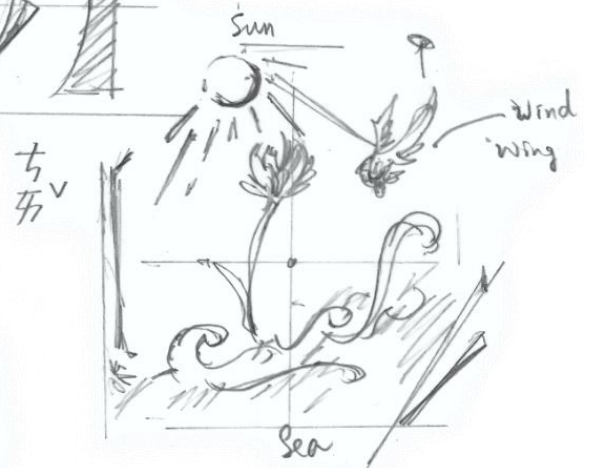
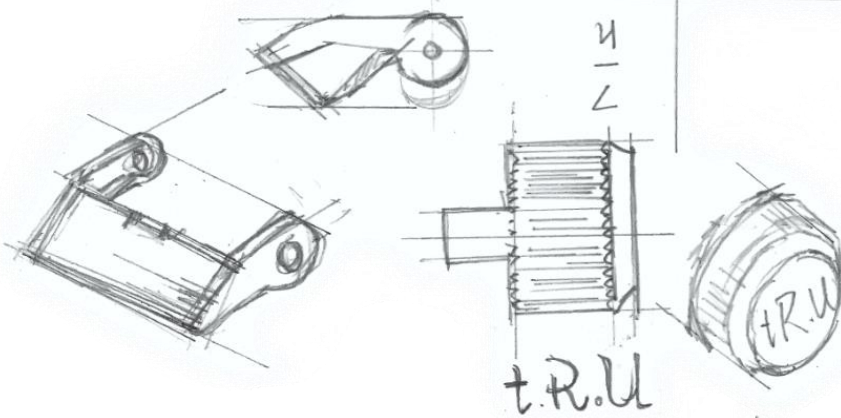


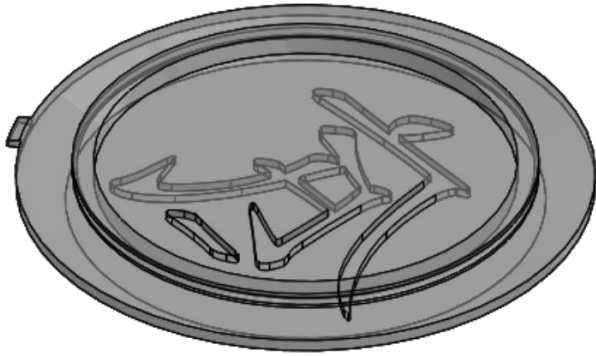
Diagram: Proposed watch design

ii) 3D Models

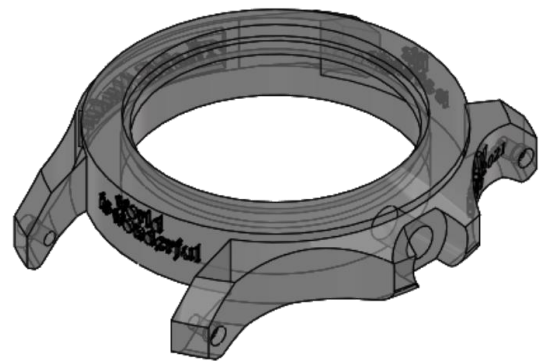
We created 3D models of the parts using Solidworks:

Diagram: 3D Model of parts

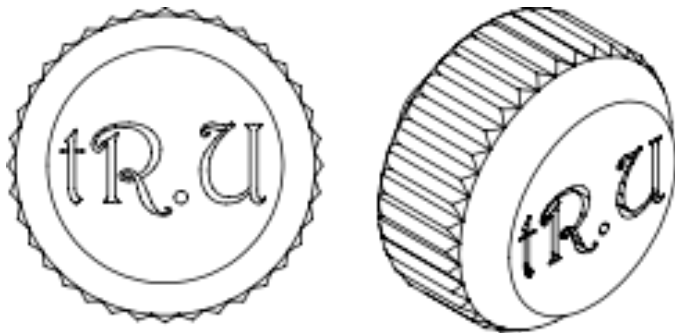
Back case



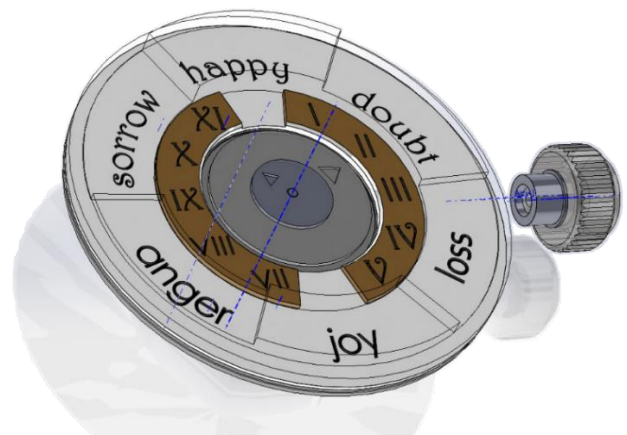
Case



Crown



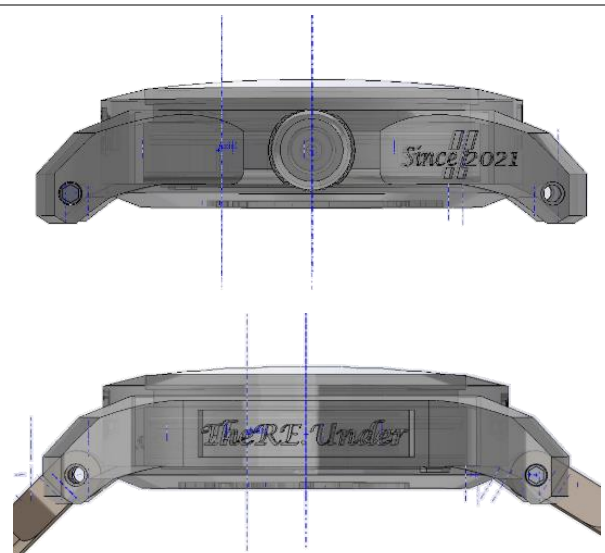
Dial & Crown



Watch – Front view



Watch – Left & Right view



The assembly of the 3D model is given below.

Diagram: 3D Printed of the assembly



iii) 3D Printing (Rapid Prototyping)

We created the prototypes of watch case, cover, dials, crown and buckle using a 3D printer (Formlabs and Objet 24/30).

Diagram: 3D Printed parts





6. Expected Challenge and Solution / Challenges Encountered

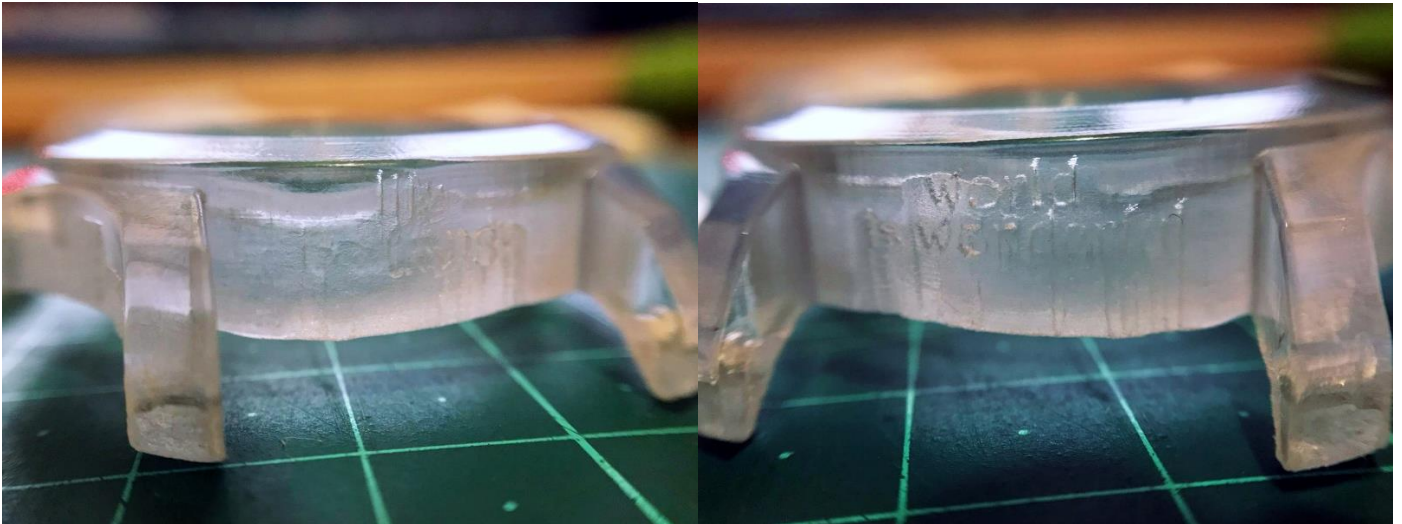
6.1 Design

Sizes were wrong and the original design did not work because members were in general not good at drawing and sketching. To solve this problem, we needed to work hard to correct the repeated mistakes.

6.2 3D Printing Issues

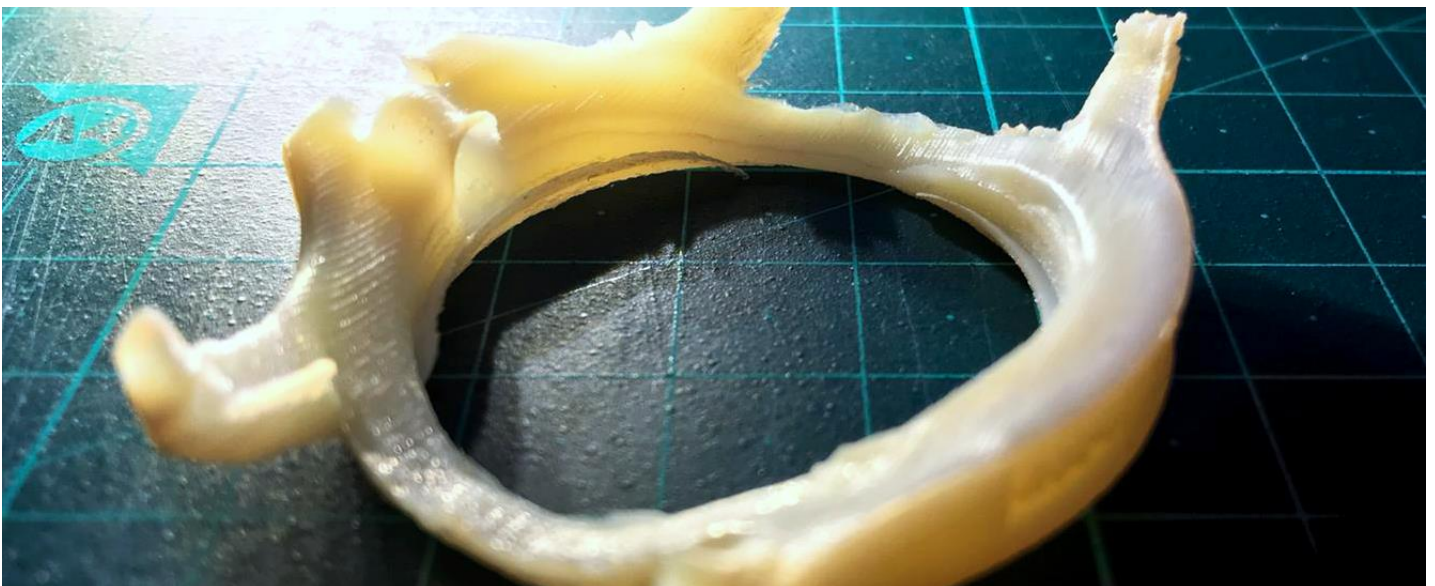
Mistakes were found on the drawings. The 3D printed samples were not the expected output because many defects were found:





6.3 Resources

The watch is heavy since steel is used. As materials are expensive, we needed to minimize our defects to avoid wasting resources.



7. Conclusion

To the showcase our watch design, we have designed a watch for joining the Watch and Clock competition.

Hopefully, our design will win a prize from the competition and be displayed at other international watch and clock fairs for promotion of the Hong Kong watch and clock industry.

8. References

Marketing Research

<https://www.omegawatches.com.hk/zh/watches>

<https://www.tissotwatches.com/zht-hk/>

<https://www.solvil-et-titus.hk/zh-hant/>

Customer Survey – Google form

<https://docs.google.com/forms/d/e/1FAIpQLSdW9mpuxvLpT2udj2FdkgEzrM14lwtT-OYXDC7RkDehYodW3g/viewform>

9. Appendices

Marketing research

*Required

Your age: *

- Below 18
- 18-24
- 25-34
- 35 or above

Your gender: *

- Male
- Female

How often do you wear your watch? *

- Always
- Sometimes
- Never

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