

**Group - 4**  
**RentorsAR**  
**(AR Products Try-On Application)**

**PROJECT SYNOPSIS**  
**(MAJOR PROJECT)**  
**DIPLOMA**  
**(COMPUTER SCIENCE ENGINEERING)**

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**LOVELY PROFESSIONAL UNIVERSITY**  
**PUNJAB**

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## **DECLARATION**

I hereby declare that the project work entitled “RentorsAR” is an authentic record of my own work carried out as requirements of major project for the award of degree of diploma(cse) from lovely professional university, Phagwara, Punjab under the guidance of Chander Kant Virdi, Amanjot Kaur and Devdutt Baresary, during January – April 2022.

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Date: 20th April’ 2022

This is to certify that the above statement made by the student is correct to the best of my knowledge and belief.

(Chander Kant Virdi, 27350, Assistant Professor)

(Devdutt Baresary, 25849, Assistant Professor)

(Amanjot Kaur, 27623, Assistant Professor)

## **ACKNOWLEDGEMENT**

We are grateful to Almighty God for giving me the strength, knowledge and understanding to complete this project.

Our profound gratitude goes to our wonderful supervisor, Chander Kant Viridi sir, Amanjot Kaur ma'am and Devdutt Baresary sir for their invaluable support, patience, time and guidance in seeing us to the completion of this project work.

We also extend gratitude and appreciation to our lecturers in cse department who have taught us at one point or the other. May God continue to bless, protect and guide you all.

We also wish to acknowledge the great support of our parents, siblings who have been a source of inspiration towards our academic pursuit. God bless you all.

we will not cease to acknowledge the support of all our friends and my team members.

Thank you!!

## **PROFILE OF THE PROBLEM**

- In today's world technology has advanced so much but still people are not having so many options to try the products virtually in real-time.
- After you like any product online, when the same arrives you sometimes don't like that product so much.
- But if you are having an option to visually see how that product looks on you and your place maybe you could have made a better choice.
- Through our application user can see the real products in real-time and help make better product choice before buying anything.
- Through our application we provide the end-user an option to try-on different category's products.
- The name of the application and website is "RentorsAR". In this app and website, the user can login on the platform and can use their user credentials to access their account.

## **EXISTING SYSTEMS**

In the current time scenario, the AR market has started noticing the augmented reality where people can buy the items while virtually seeing those products.

But those applications are mainly consisting of interior decoration of the user's home and are foreign based.

Our application is based in our home country and provides the users with AR products which are not yet developed in the market or are not so good as per the user experience.

Our app provides user to buy and preview item in India.

## **SCOPE OF OUR PROJECT**

### **✓ Features:**

- Augmented reality product try-on.
- Many categories available to try-on.
- Different color option for products.
- Different price options to choose from.
- Weblinks for different purchase option.

### **✓ What is there for the users?**

- In the current ecommerce market, there aren't much options available to virtually try-on the products.
- And due to the pandemic online shopping has increased drastically over the months and, many a times users have made wrong product buying choices.
- To overcome the drawbacks of those applications we have developed RentorsAR, an augmented reality solution for products try-on at your sweet homeplace or anywhere you like.
- Our application provides the user the platform to try-on in real-time so that they can compare themselves which product is better for them.
- The main objective is to make the user directly see on themselves which product suites them or their place better using augmented reality.

### **✓ How it will be done?**

- The application interface would be easy to use, user can select any category and see the relative products.
- On tapping each product, the same can be viewed on the user itself using an image target and a product description window will also be shown to the user.
- Color option will also be provided to users.
- Prices comparison chart will also be there to help the user decide better.

## **PROJECT PLAN**

Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13
Project Activities													
Planning													
Design													
Coding													
Testing													
Delivery													

### **GANTT CHART REPRESENTATION**

- Steps followed in this project are: -
  - ❖ Requirement Gathering: In this step we looked upon various ecommerce applications and tried to find out the limitations and some drawback of those app and website.
  - ❖ Planning: We have set goals and defining the actions required to achieve the project goal.
  - ❖ Design: In this step we created the blueprint for the app and website which is to be developed.
  - ❖ Development: In this step we start the process of developing the app and website using the plans and designs we have created in the previous step.

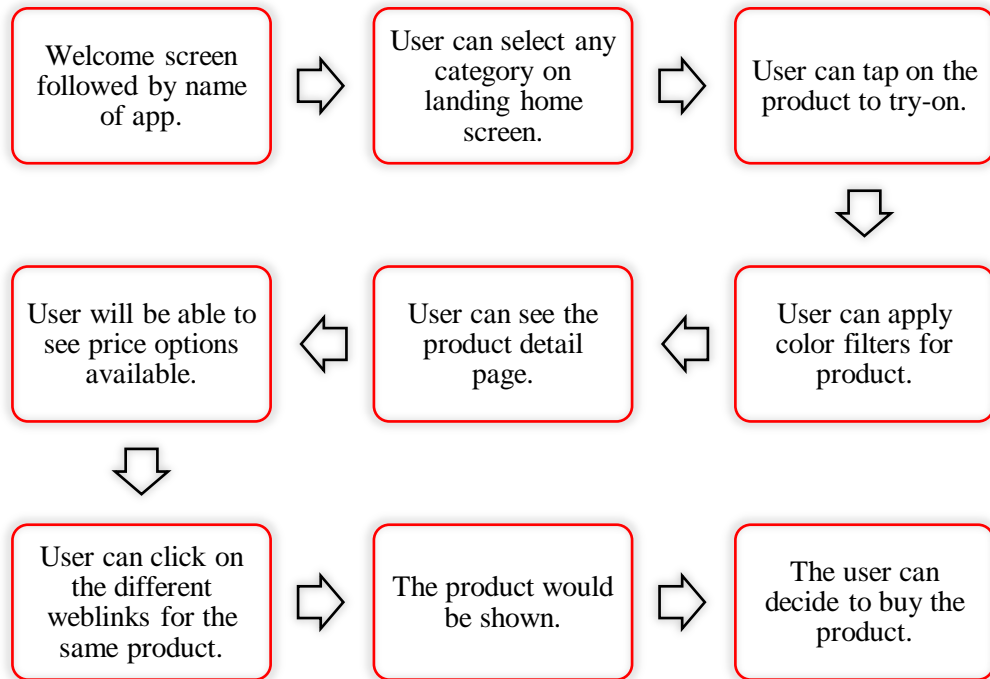
## **SOFTWARE REQUIREMENT ANALYSIS**

- Facilities i.e., software/hardware required to design this app and website are mentioned below:
  - As a Software Development Platform, we are using Unity engine, Visual Studio 2019 for the feasibility.
  - For the mobile application we are using, unity engine as front-end technology and firebase as back-end technology.
  - As for the Hardware needs all the team members will be using Windows Laptop.
  - We use own mobiles for testing the app.

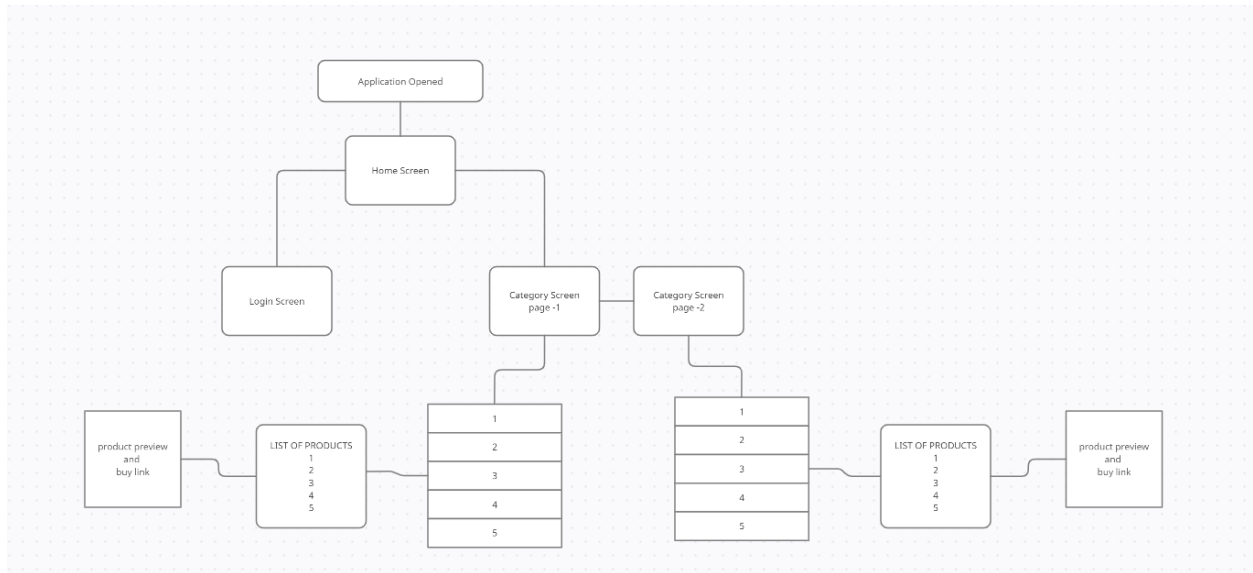


## **DESIGN**

Flowchart:



## Data Flow Diagram:

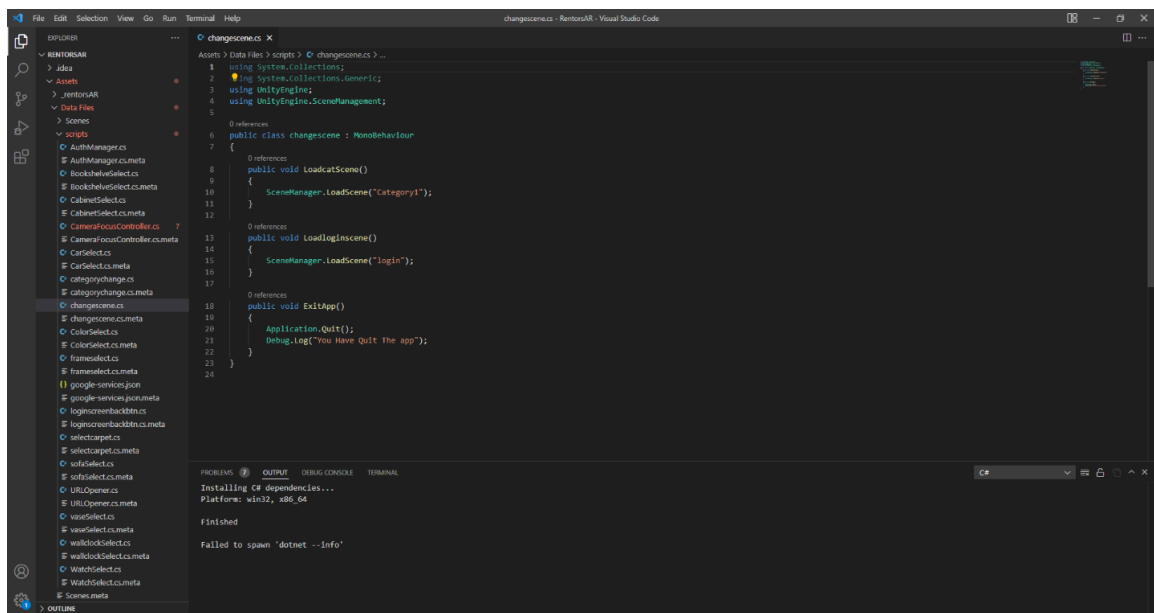


# COMPLETE PROJECT

## MAIN SCREEN-



## CODE FOR MAIN SCREEN:-



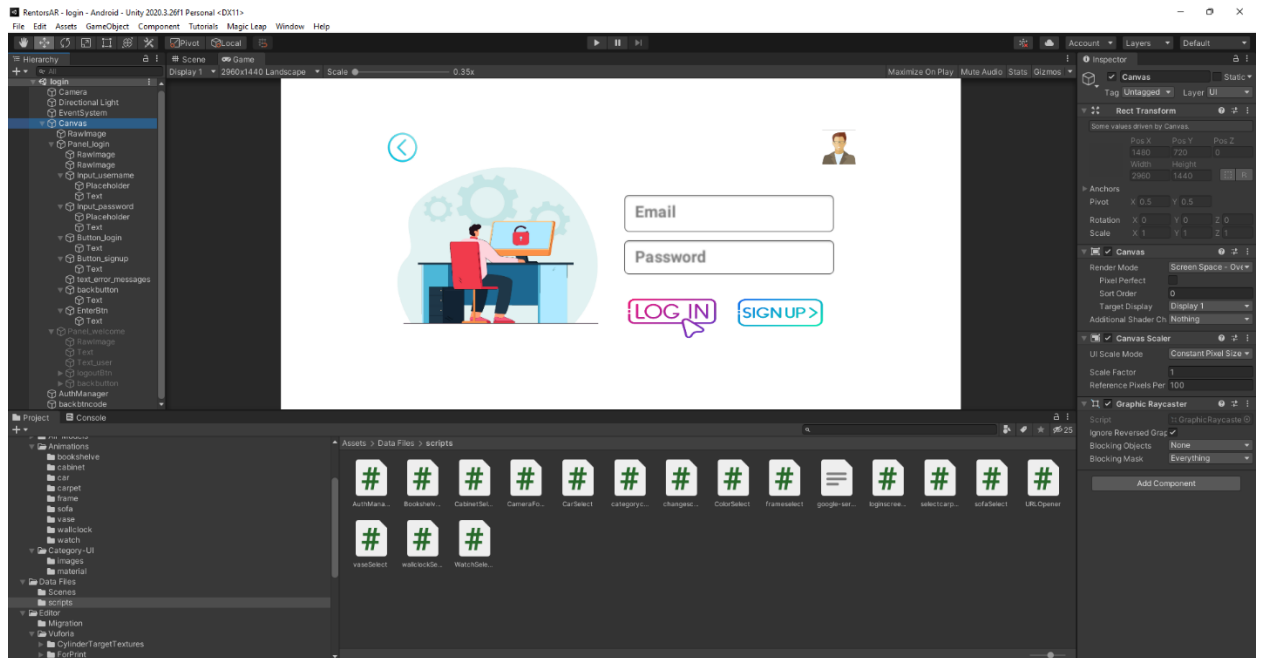


LOGIN

&

SIGNUP

PAGE:-



CODING

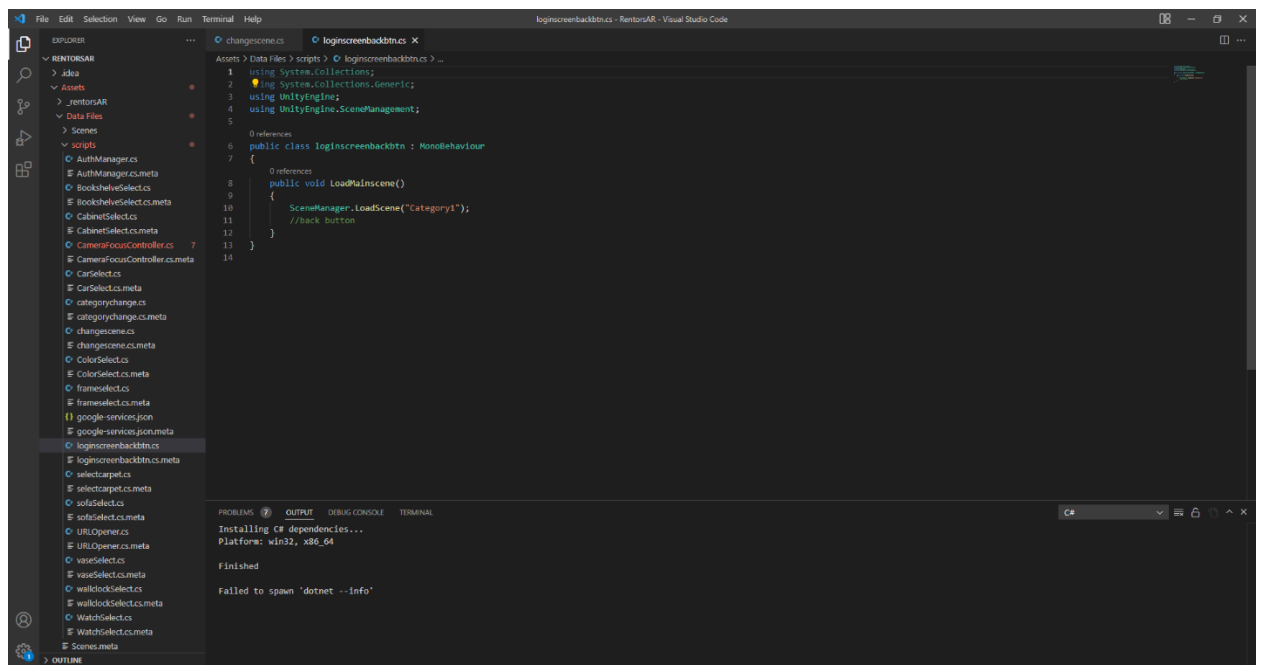
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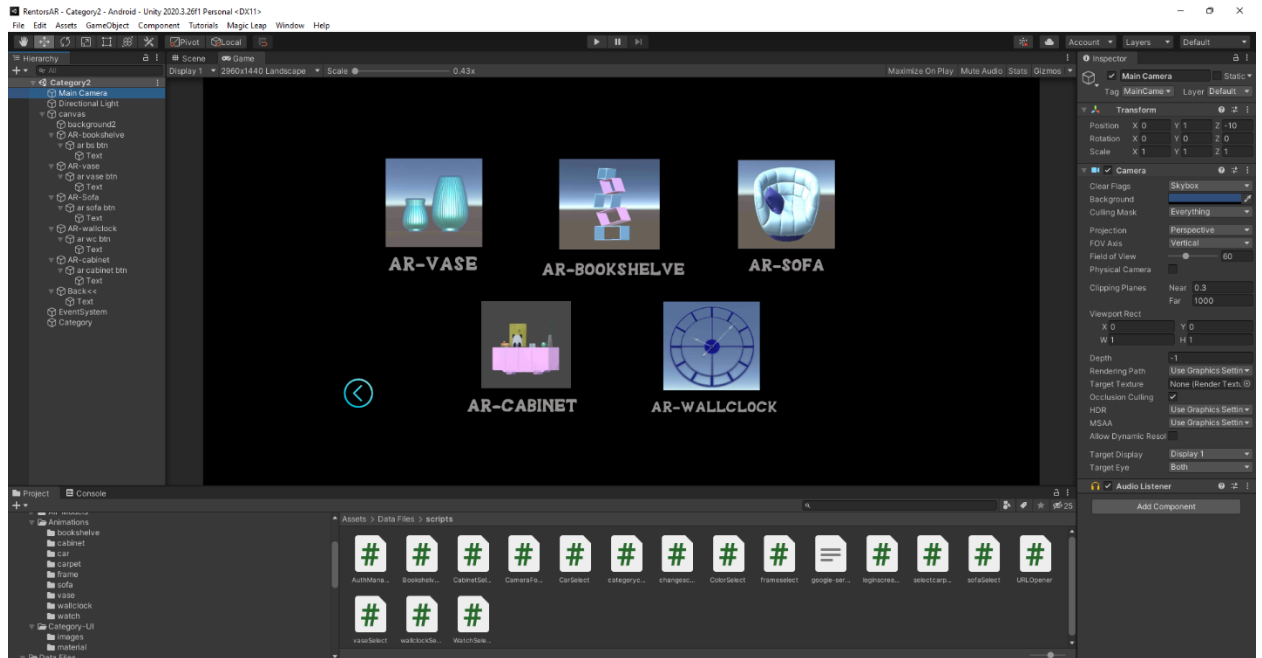
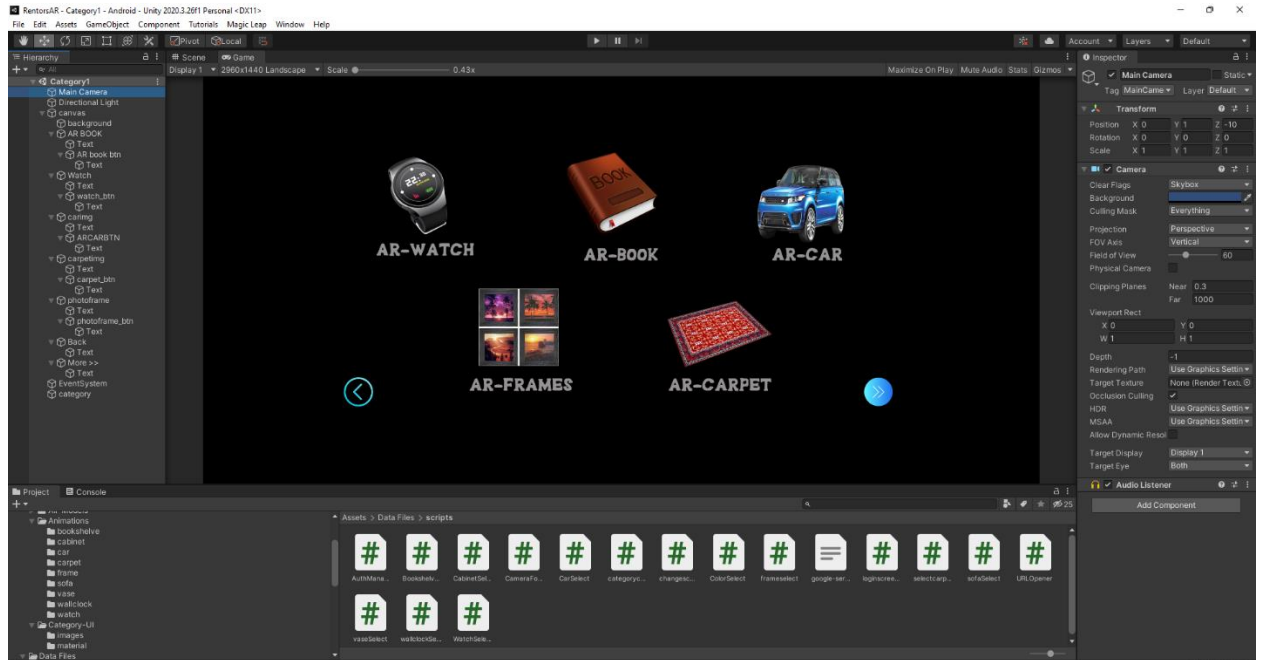
LOGIN

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PAGE:-

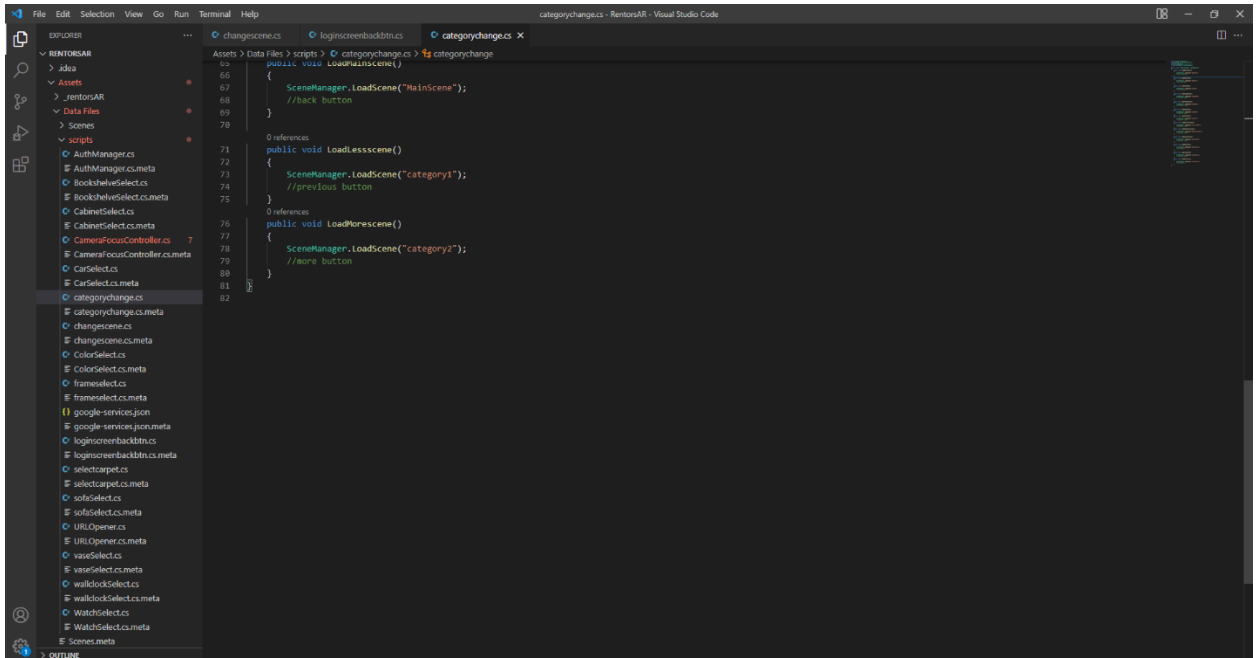






```
1 using System.Collections;
2 using System.Collections.Generic;
3 using UnityEngine;
4 using UnityEngine.SceneManagement;
5
6 public class categorychange : MonoBehaviour
7 {
8     0 references
9     public void LoadMatchScene()
10     {
11         SceneManager.LoadScene("MatchAR");
12         //Match AR scene
13     }
14
15     0 references
16     public void LoadBookScene()
17     {
18         SceneManager.LoadScene("BookAR");
19         //Book AR scene
20     }
21
22     0 references
23     public void LoadCarScene()
24     {
25         SceneManager.LoadScene("CarAR");
26         //Car AR scene
27     }
28
29     0 references
30     public void LoadCarpetScene()
31     {
32         SceneManager.LoadScene("CarpetAR");
33         //carpet AR scene
34     }
35
36     0 references
37     public void LoadFramesScene()
38     {
39         SceneManager.LoadScene("FrameAR");
40         //carpet AR scene
41     }
42
43     0 references
44     public void LoadSofaScene()
45     {
46         SceneManager.LoadScene("sofaAR");
47         //carpet AR scene
48     }
49 }
```

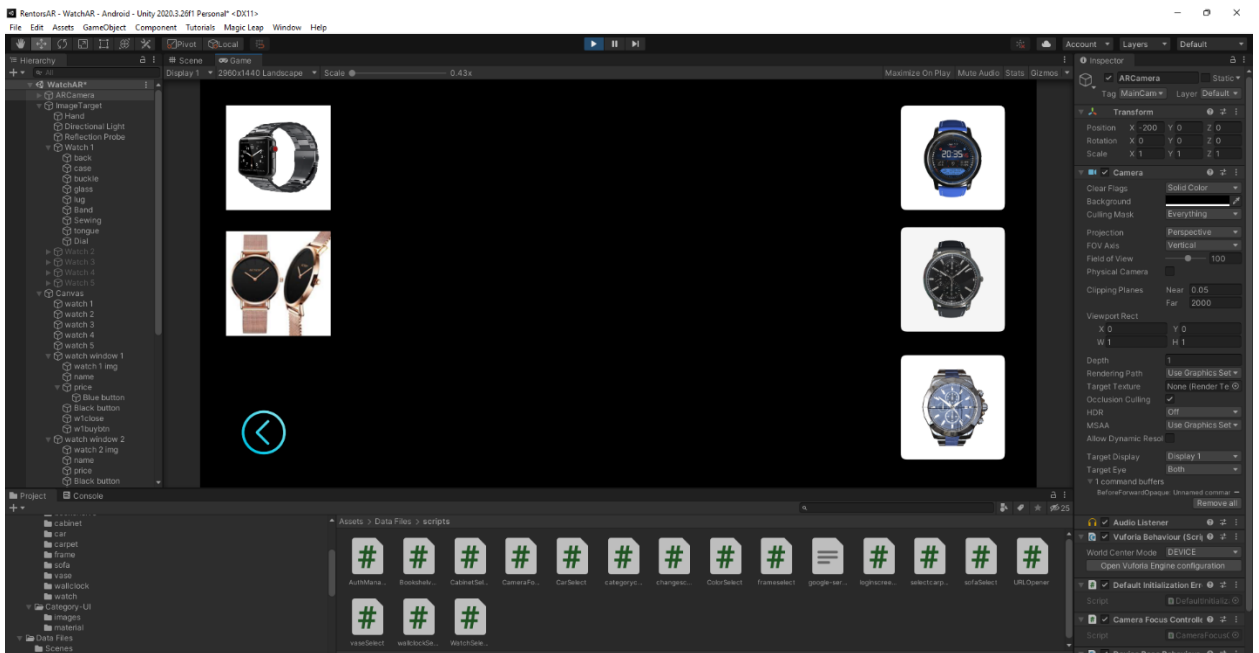
```
39 {
40     SceneManager.LoadScene("sofaAR");
41     //carpet AR scene
42 }
43
44 0 references
45 public void LoadVaseScene()
46 {
47     SceneManager.LoadScene("VaseAR");
48     //carpet AR scene
49 }
50
51 0 references
52 public void LoadWallClockScene()
53 {
54     SceneManager.LoadScene("wallclockAR");
55     //carpet AR scene
56 }
57
58 0 references
59 public void LoadBookShelfScene()
60 {
61     SceneManager.LoadScene("BookShelvesAR");
62     //carpet AR scene
63 }
64
65 0 references
66 public void LoadCabinetScene()
67 {
68     SceneManager.LoadScene("CabinetAR");
69     //carpet AR scene
70 }
71
72 0 references
73 public void LoadMainScene()
74 {
75     SceneManager.LoadScene("MainScene");
76     //back button
77 }
78
79 0 references
80 public void LoadLessScene()
81 {
82     SceneManager.LoadScene("category1");
83     //previous button
84 }
85
86 0 references
87 public void LoadMoreScene()
88 {
89     SceneManager.LoadScene("category2");
90     //more button
91 }
```

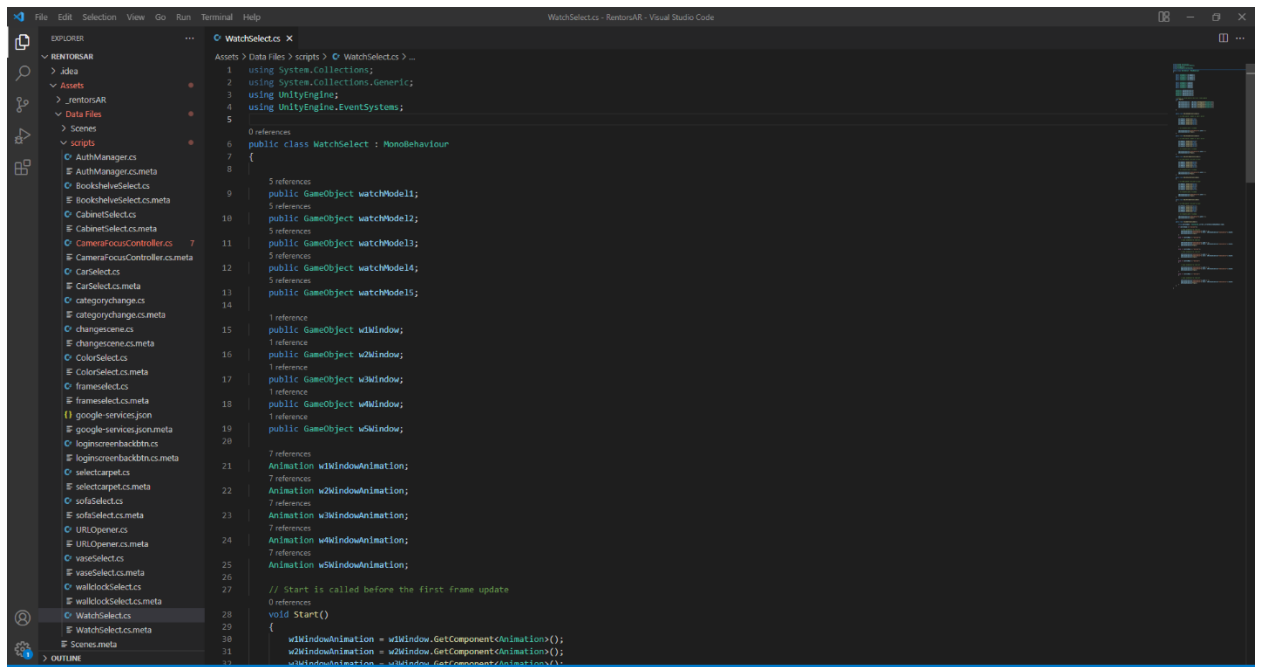
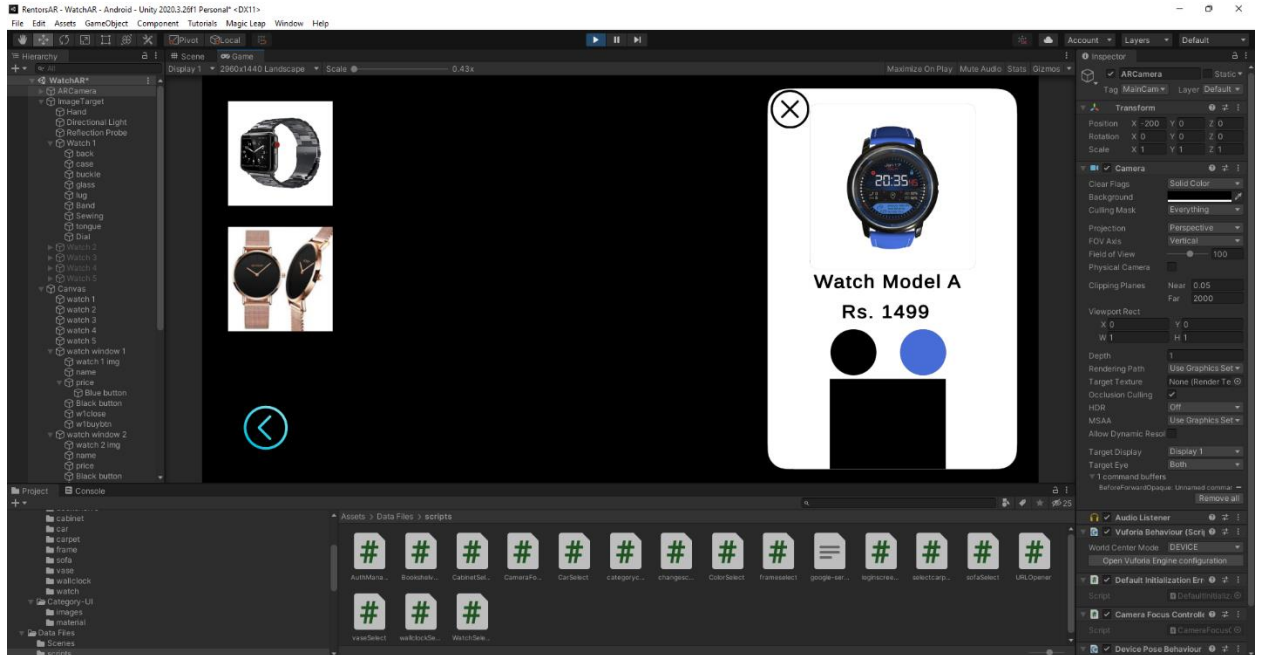


## CATEGORY:

## ✓ WATCH

## AR:



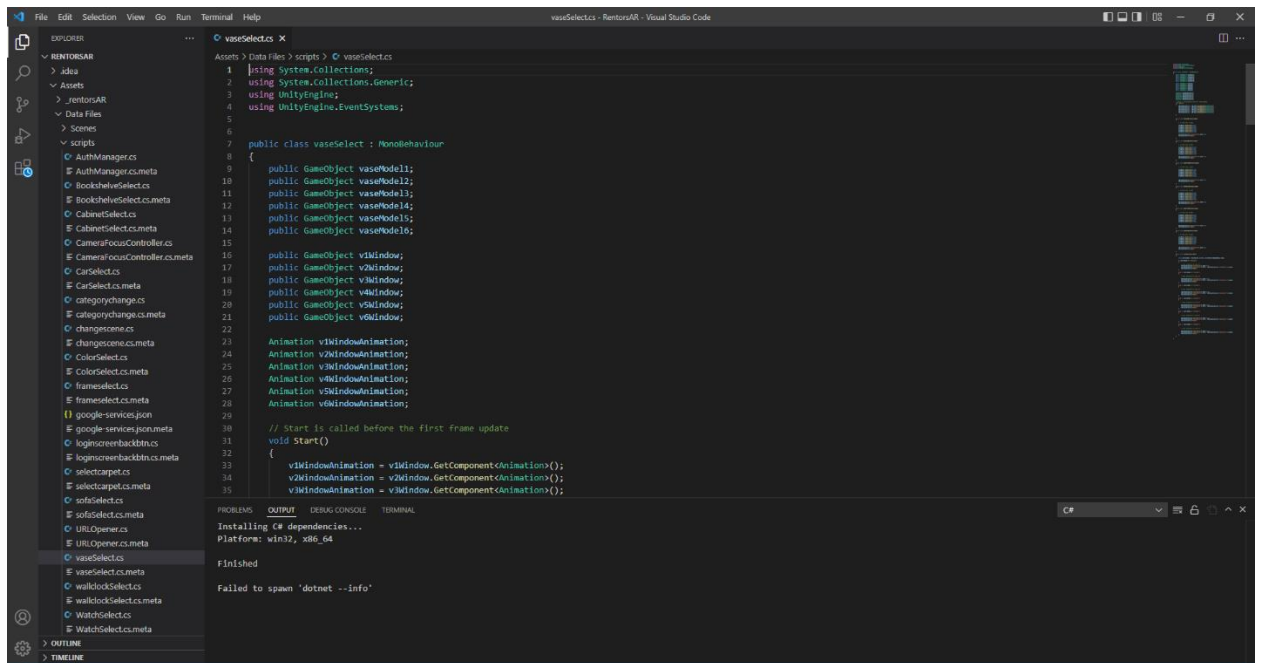
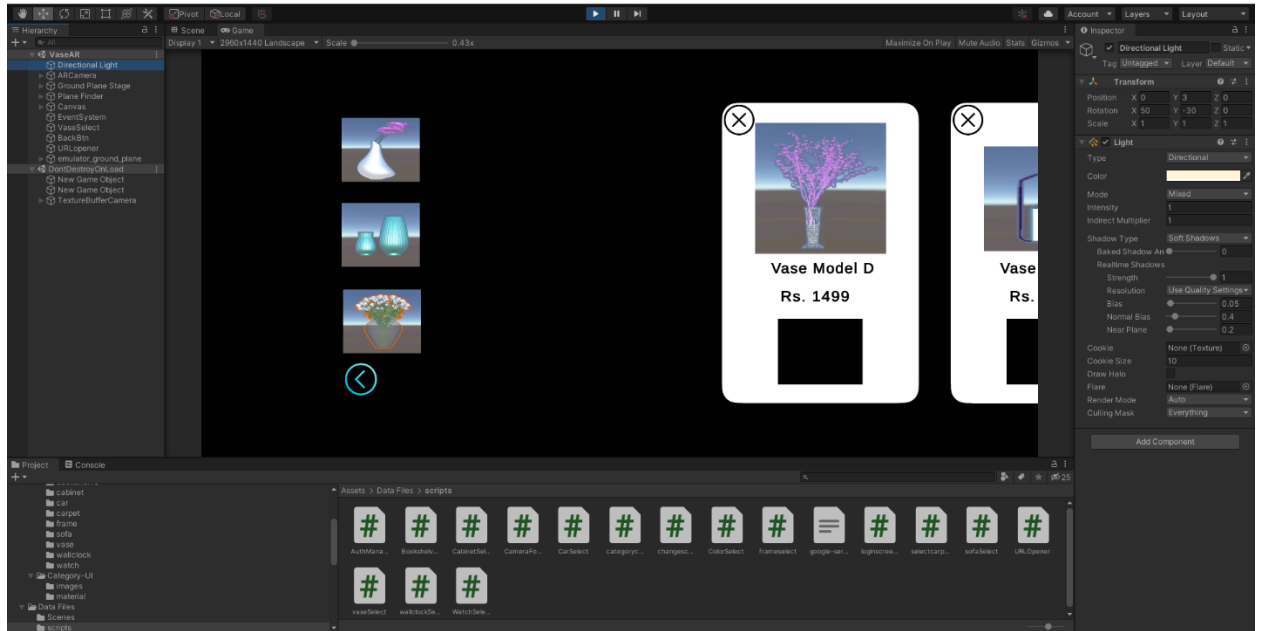


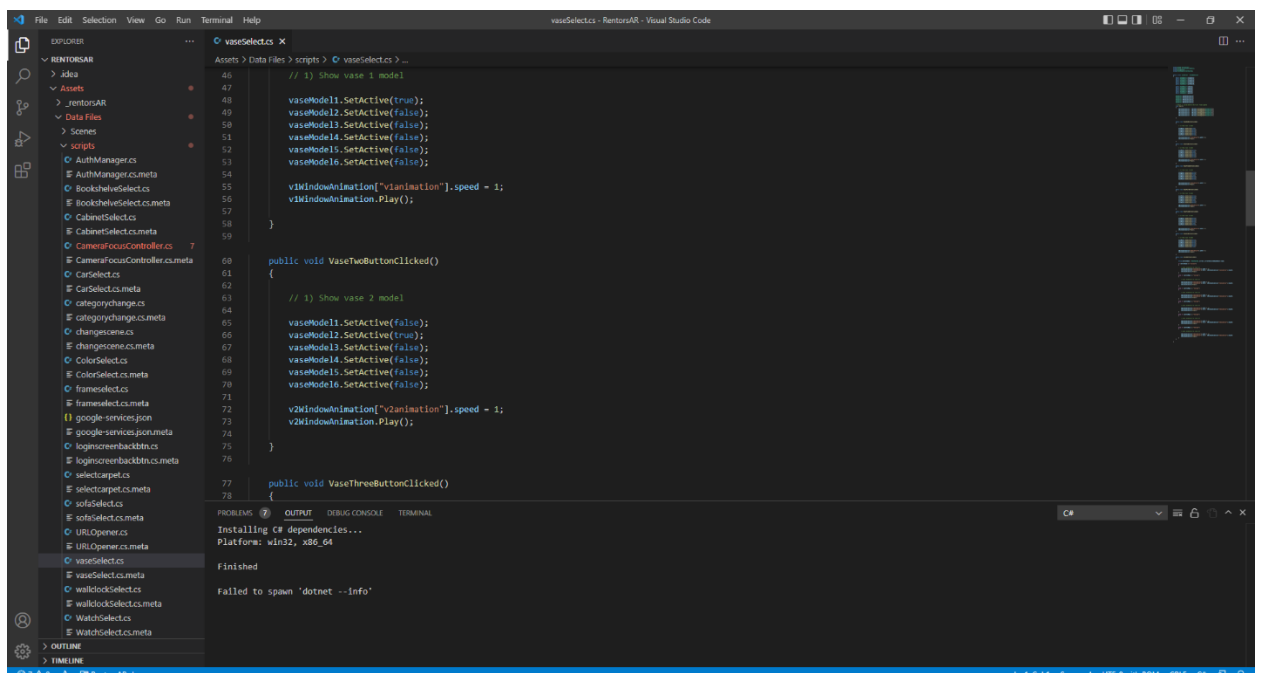
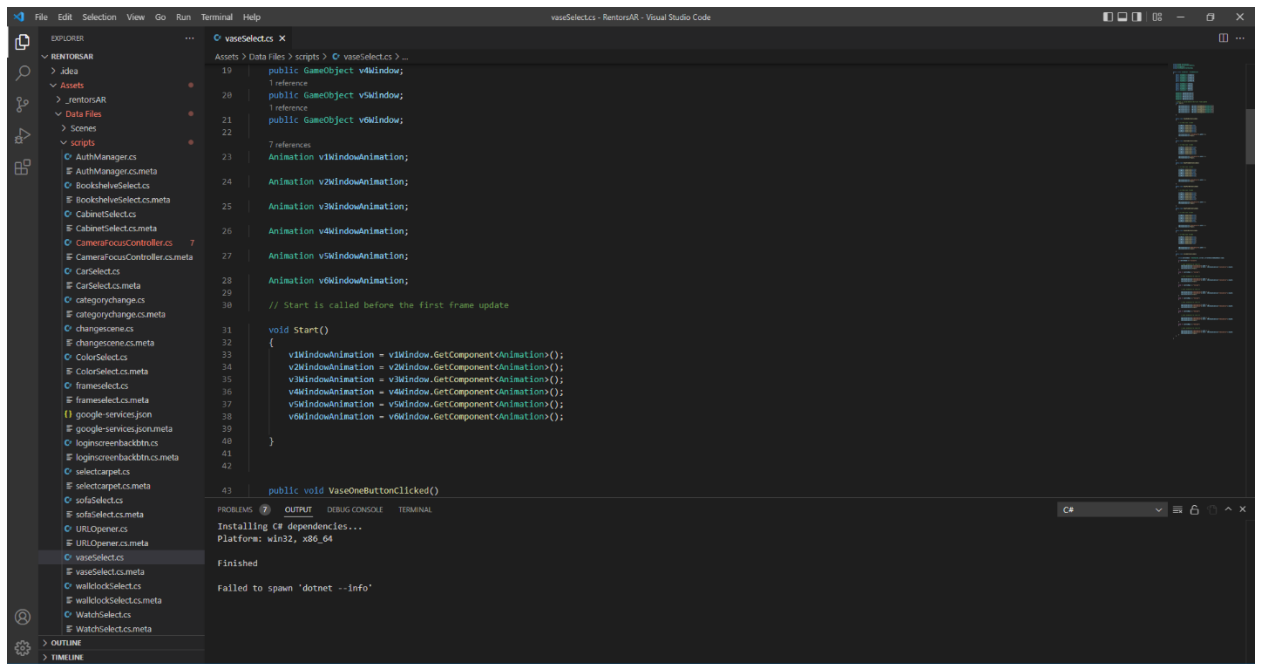


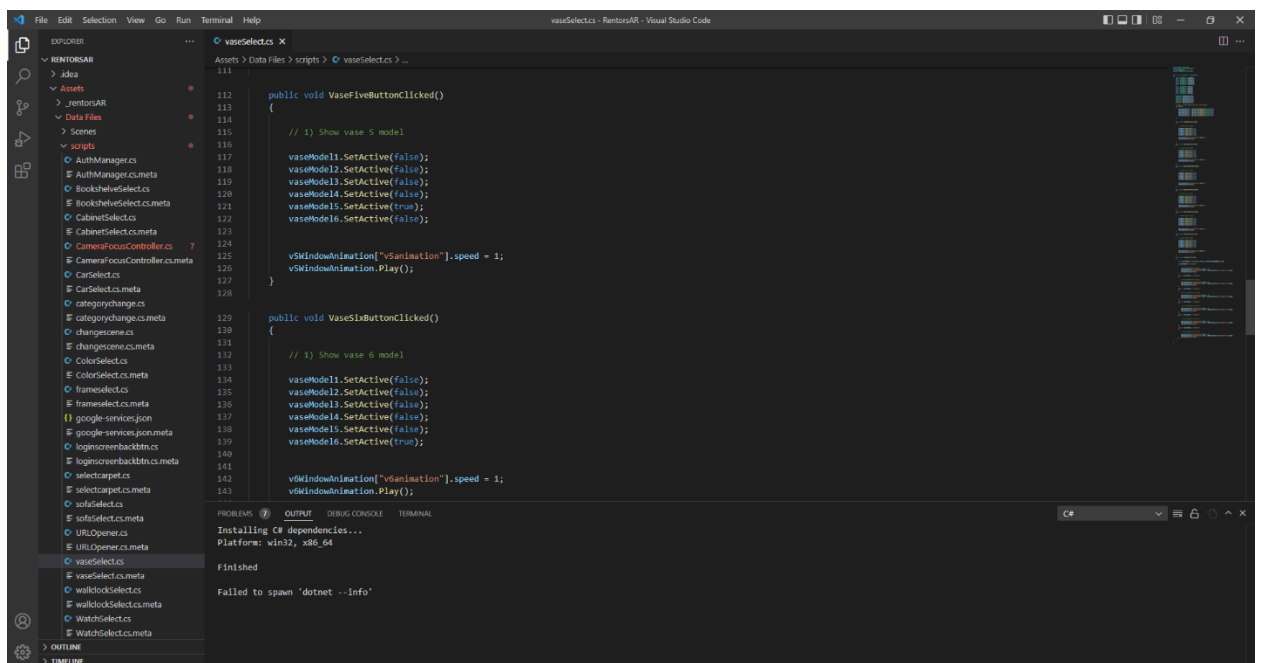
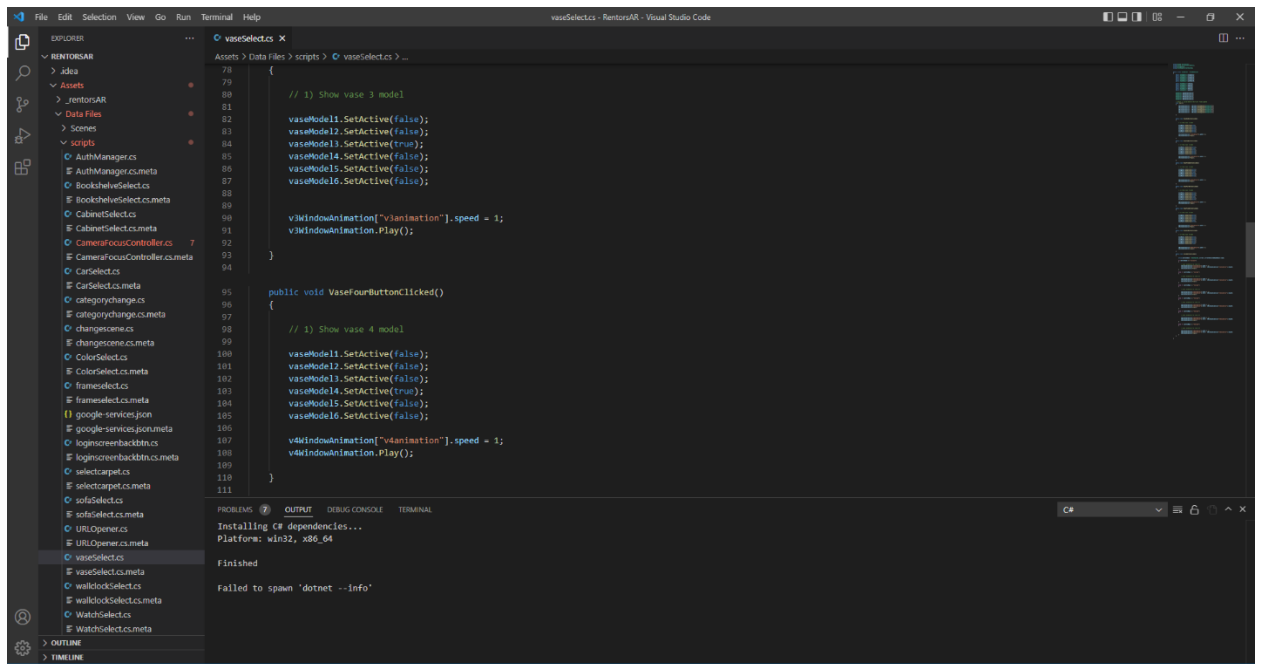
```
Assets > Data Files > scripts > WatchSelect.cs > ...
34 w1WindowAnimation = w1Window.GetComponent<Animation>();
35 }
36
37 0 references
38 public void WatchOneButtonClicked(){
39     // 1) Show watch 1 model on user's wrist
40     watchModel1.SetActive(true);
41     watchModel2.SetActive(false);
42     watchModel3.SetActive(false);
43     watchModel4.SetActive(false);
44     watchModel5.SetActive(false);
45
46     // 2) Animate watch 1 window
47     w1WindowAnimation["w1animation"].speed = 1;
48     w1WindowAnimation.Play();
49 }
50
51 0 references
52 public void WatchTwoButtonClicked(){
53     // 1) Show watch 2 model on user's wrist
54     watchModel1.SetActive(false);
55     watchModel2.SetActive(true);
56     watchModel3.SetActive(false);
57     watchModel4.SetActive(false);
58     watchModel5.SetActive(false);
59
60     // 2) Animate watch 2 window
61     w2WindowAnimation["w2animation"].speed = 1;
62     w2WindowAnimation.Play();
63 }
64
65 0 references
66 public void WatchThreeButtonClicked(){
67     // 1) Show watch 3 on user's wrist
68     watchModel1.SetActive(false);
69     watchModel2.SetActive(false);
70     watchModel3.SetActive(true);
71     watchModel4.SetActive(false);
72     watchModel5.SetActive(false);
73
74     // 2) Animate watch 3 window
75     w3WindowAnimation["w3animation"].speed = 1;
76     w3WindowAnimation.Play();
77 }
78
79 0 references
80 public void WatchFourButtonClicked(){
81     // 1) Show watch 4 on user's wrist
82     watchModel1.SetActive(false);
83     watchModel2.SetActive(false);
84     watchModel3.SetActive(false);
85     watchModel4.SetActive(true);
86     watchModel5.SetActive(false);
87
88     // 2) Animate watch 4 window
89     w4WindowAnimation["w4animation"].speed = 1;
90     w4WindowAnimation.Play();
91 }
92
93 0 references
94 public void WatchFiveButtonClicked(){
95     // 1) Show watch 5 on user's wrist
96     watchModel1.SetActive(false);
97     watchModel2.SetActive(false);
98     watchModel3.SetActive(false);
99     watchModel4.SetActive(false);
100     watchModel5.SetActive(true);
101
102     // 2) Animate watch 5 window
103     w5WindowAnimation["w5animation"].speed = 1;
104     w5WindowAnimation.Play();
105 }
106
107 0 references
108 public void CloseButtonClicked(){
109     string buttonName = EventSystem.current.currentSelectedGameObject.name;
110
111     if (buttonName == "w1close"){
112         // play animation to close w1
113         w1WindowAnimation["w1animation"].speed = -1;
114         w1WindowAnimation["w1animation"].time = w1WindowAnimation["w1animation"].length;
115         w1WindowAnimation.Play();
116     }
117
118     if (buttonName == "w2close"){
119         // play animation to close w2
120         w2WindowAnimation["w2animation"].speed = -1;
121         w2WindowAnimation["w2animation"].time = w2WindowAnimation["w2animation"].length;
122         w2WindowAnimation.Play();
123     }
124
125     if (buttonName == "w3close"){
126         // play animation to close w3
127         w3WindowAnimation["w3animation"].speed = -1;
128         w3WindowAnimation["w3animation"].time = w3WindowAnimation["w3animation"].length;
129         w3WindowAnimation.Play();
130     }
131
132     if (buttonName == "w4close"){
133         // play animation to close w4
134         w4WindowAnimation["w4animation"].speed = -1;
135         w4WindowAnimation["w4animation"].time = w4WindowAnimation["w4animation"].length;
136         w4WindowAnimation.Play();
137     }
138
139     if (buttonName == "w5close"){
140         // play animation to close w5
141         w5WindowAnimation["w5animation"].speed = -1;
142         w5WindowAnimation["w5animation"].time = w5WindowAnimation["w5animation"].length;
143         w5WindowAnimation.Play();
144     }
145 }
```

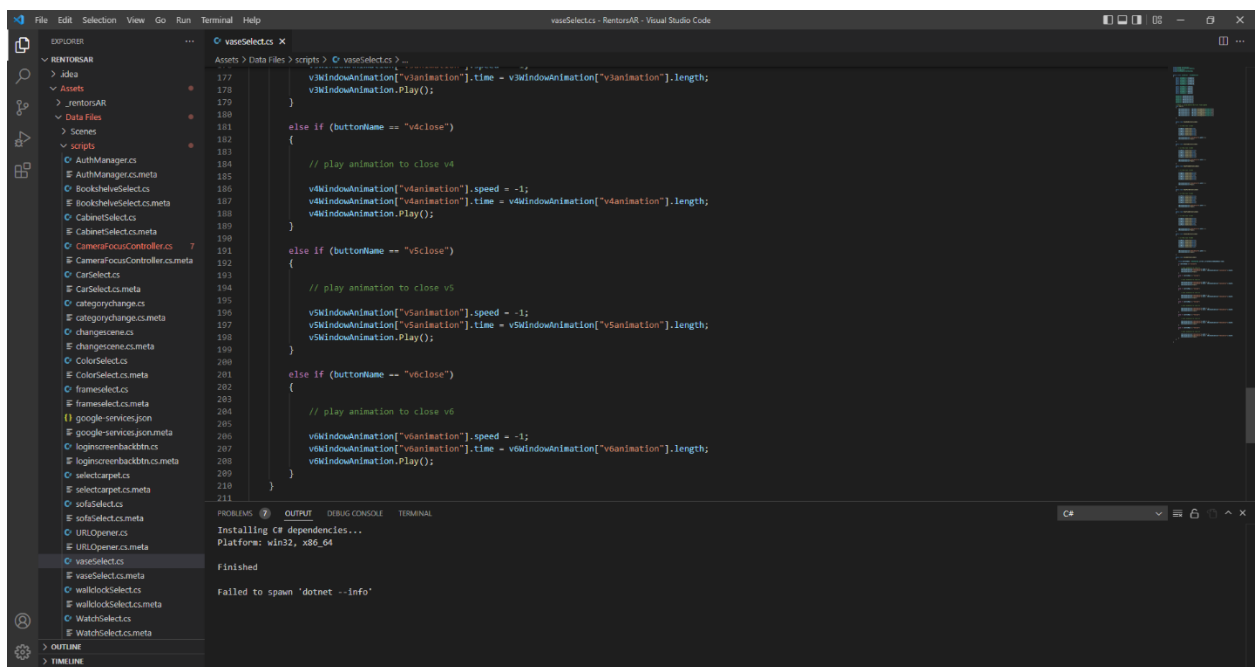
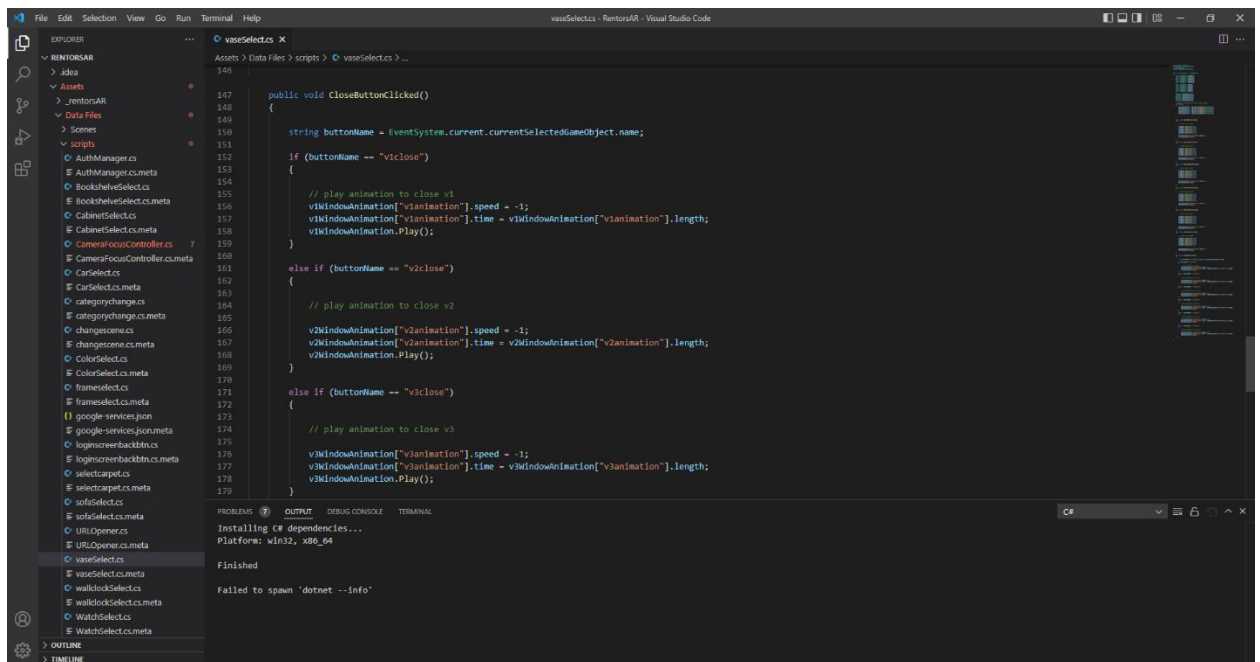
```
Assets > Data Files > scripts > WatchSelect.cs > ...
88 public void WatchFourButtonClicked()
89 {
90     // 1) Show watch 4 on user's wrist
91     watchModel1.SetActive(false);
92     watchModel2.SetActive(false);
93     watchModel3.SetActive(false);
94     watchModel4.SetActive(true);
95     watchModel5.SetActive(false);
96
97     // 2) Animate watch 4 window
98     w4WindowAnimation["w4animation"].speed = 1;
99     w4WindowAnimation.Play();
100 }
101
102 0 references
103 public void WatchFiveButtonClicked()
104 {
105     // 1) Show watch 5 on user's wrist
106     watchModel1.SetActive(false);
107     watchModel2.SetActive(false);
108     watchModel3.SetActive(false);
109     watchModel4.SetActive(false);
110     watchModel5.SetActive(true);
111
112     // 2) Animate watch 5 window
113     w5WindowAnimation["w5animation"].speed = 1;
114     w5WindowAnimation.Play();
115 }
116
117 0 references
118 public void CloseButtonClicked(){
119     string buttonName = EventSystem.current.currentSelectedGameObject.name;
120
121     if (buttonName == "w1close"){
122         // play animation to close w1
123         w1WindowAnimation["w1animation"].speed = -1;
124         w1WindowAnimation["w1animation"].time = w1WindowAnimation["w1animation"].length;
125         w1WindowAnimation.Play();
126     }
127
128     if (buttonName == "w2close"){
129         // play animation to close w2
130         w2WindowAnimation["w2animation"].speed = -1;
131         w2WindowAnimation["w2animation"].time = w2WindowAnimation["w2animation"].length;
132         w2WindowAnimation.Play();
133     }
134
135     if (buttonName == "w3close"){
136         // play animation to close w3
137         w3WindowAnimation["w3animation"].speed = -1;
138         w3WindowAnimation["w3animation"].time = w3WindowAnimation["w3animation"].length;
139         w3WindowAnimation.Play();
140     }
141
142     if (buttonName == "w4close"){
143         // play animation to close w4
144         w4WindowAnimation["w4animation"].speed = -1;
145         w4WindowAnimation["w4animation"].time = w4WindowAnimation["w4animation"].length;
146         w4WindowAnimation.Play();
147     }
148
149     if (buttonName == "w5close"){
150         // play animation to close w5
151         w5WindowAnimation["w5animation"].speed = -1;
152         w5WindowAnimation["w5animation"].time = w5WindowAnimation["w5animation"].length;
153         w5WindowAnimation.Play();
154     }
155 }
```











## **BIBLIOGRAPHY**

RentorsAR

20<sup>th</sup> April'2022

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Mini Tejaswi    UPDATED: FEBRUARY 26, 2022 21:18 IST

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Srinivas Kollipara Published 30 Oct'18