第3回　情報科学演習 II

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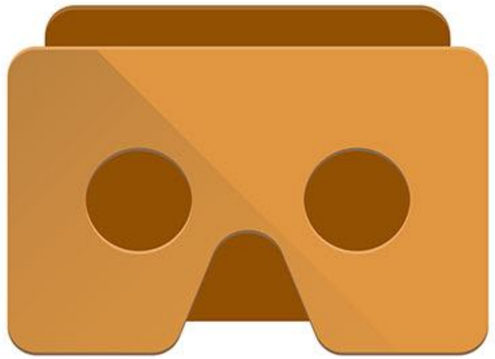
目次

今回やったこと

VRでお絵かきができるプログラムの作成



開発環境

- **Unity**

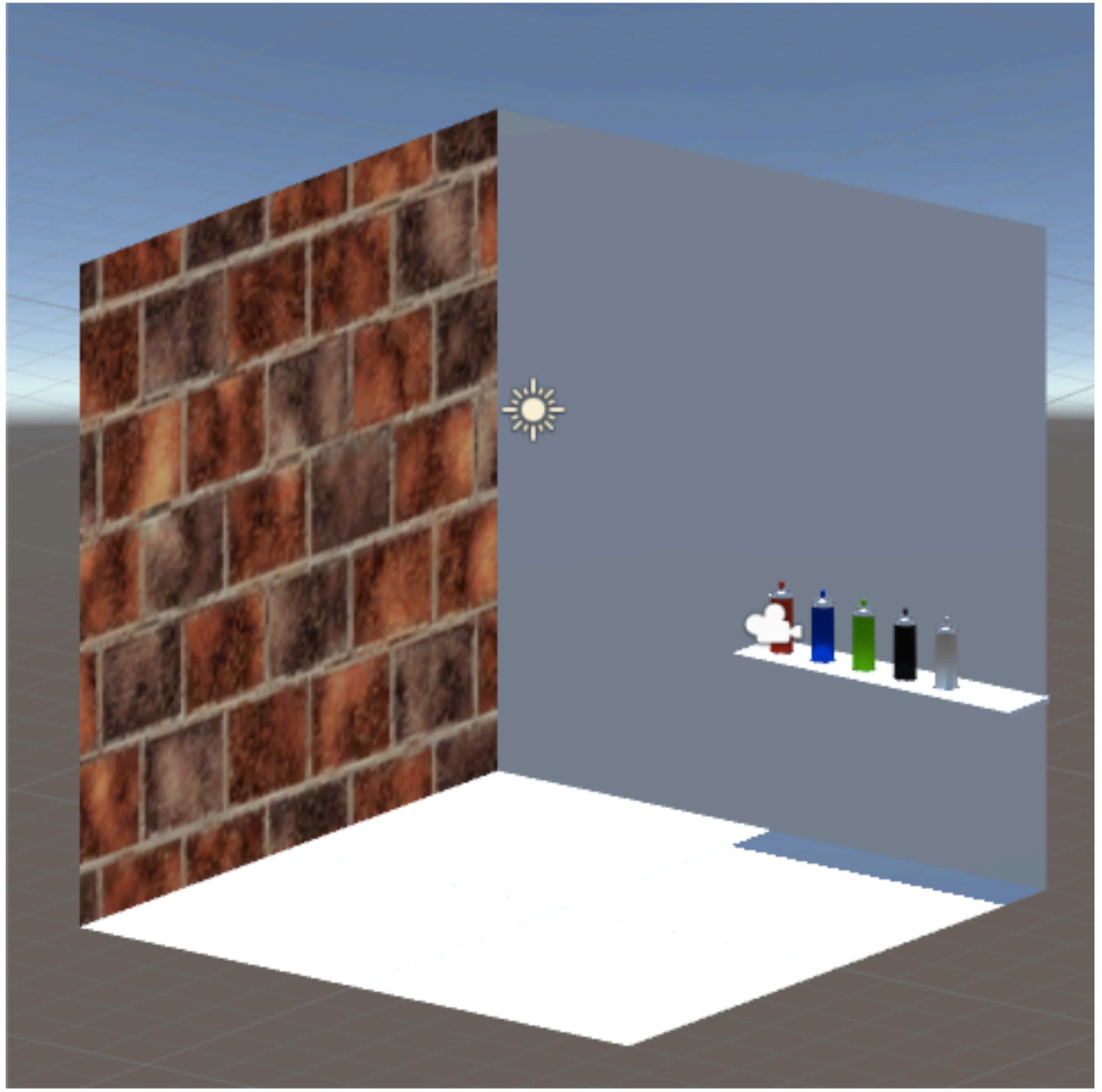
  バージョン：2017.2.1f1

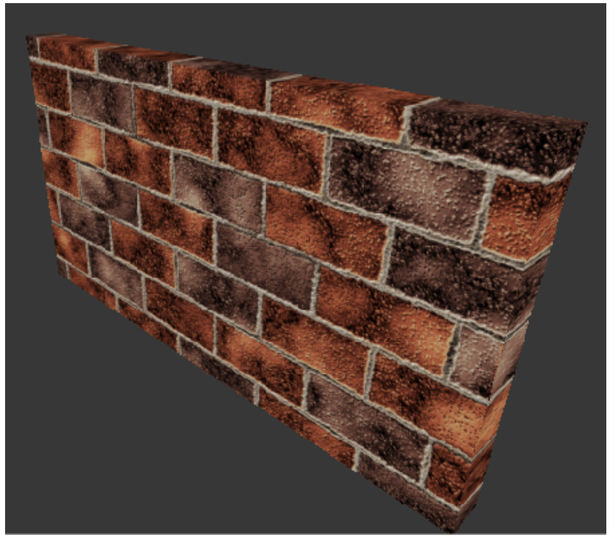
- **VR**

  GoogleVR

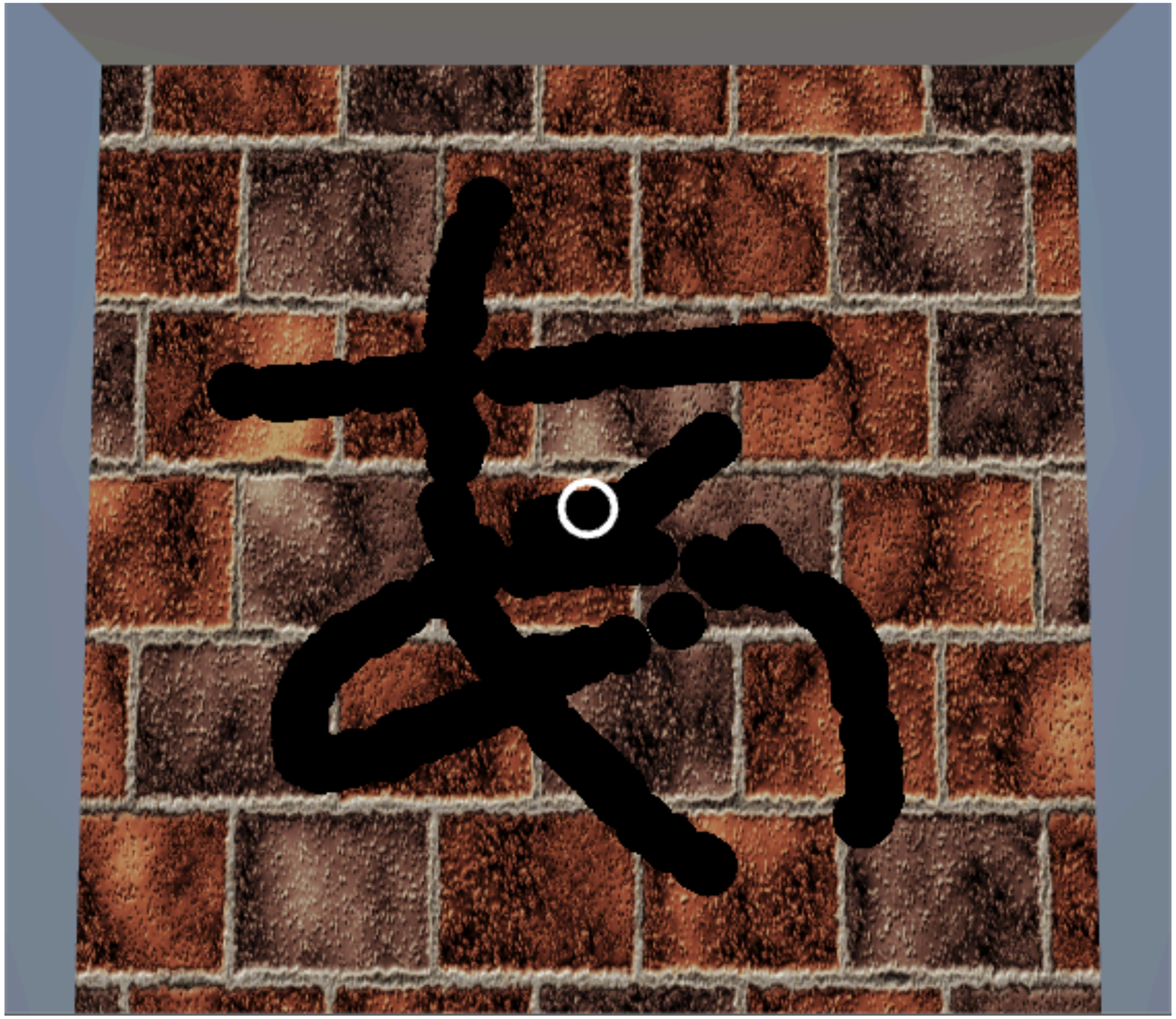
  ボタン付き

制作物の説明(1)

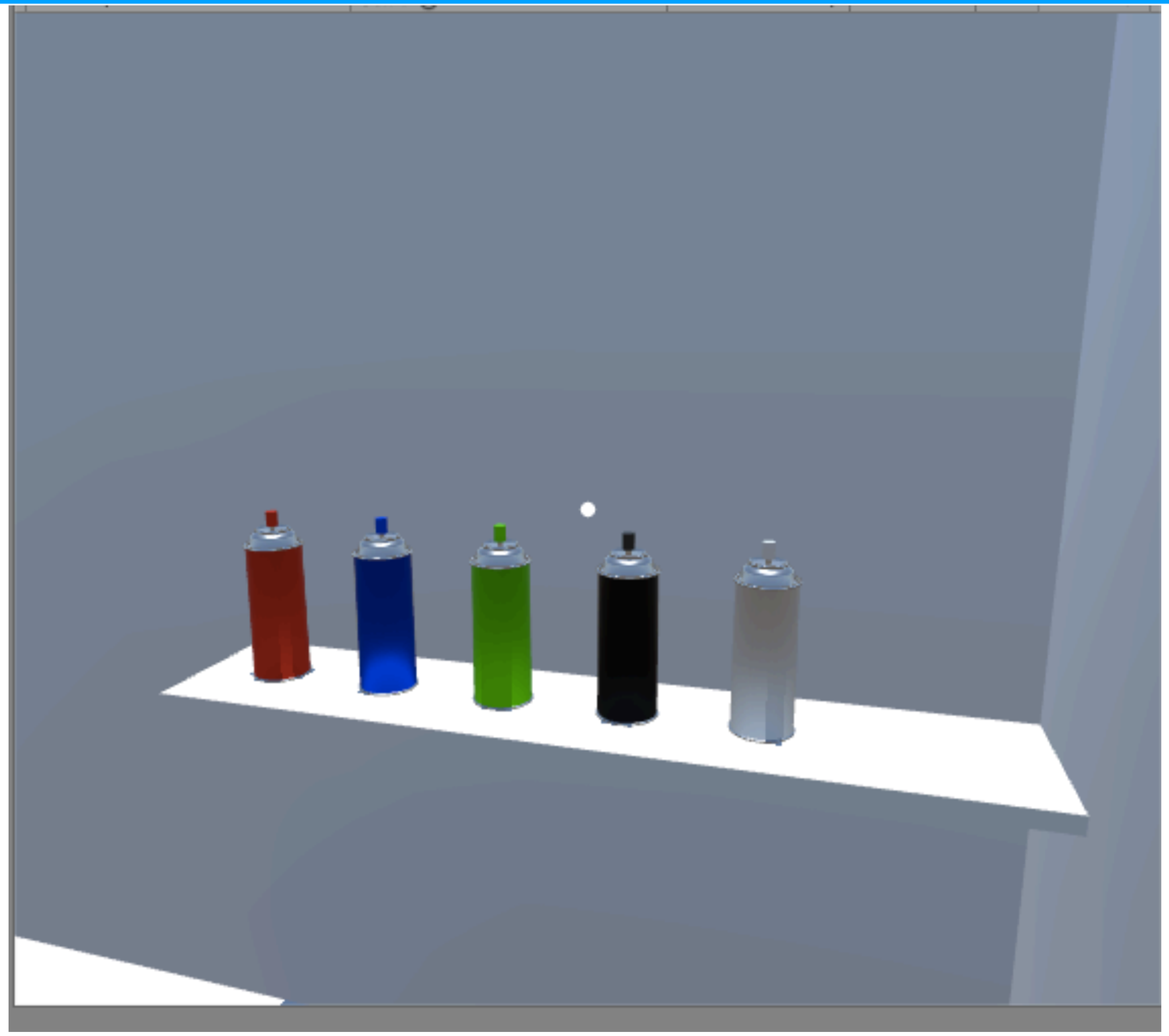




制作物の説明(2)



制作物の説明(3)

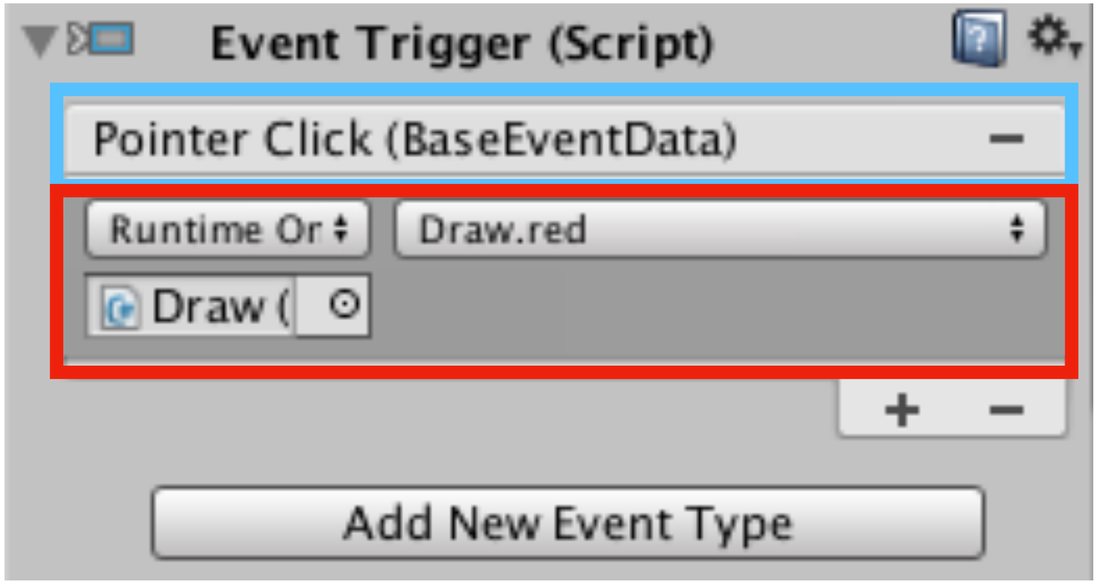


プログラムの説明(１)

・色の変更

：指定動作

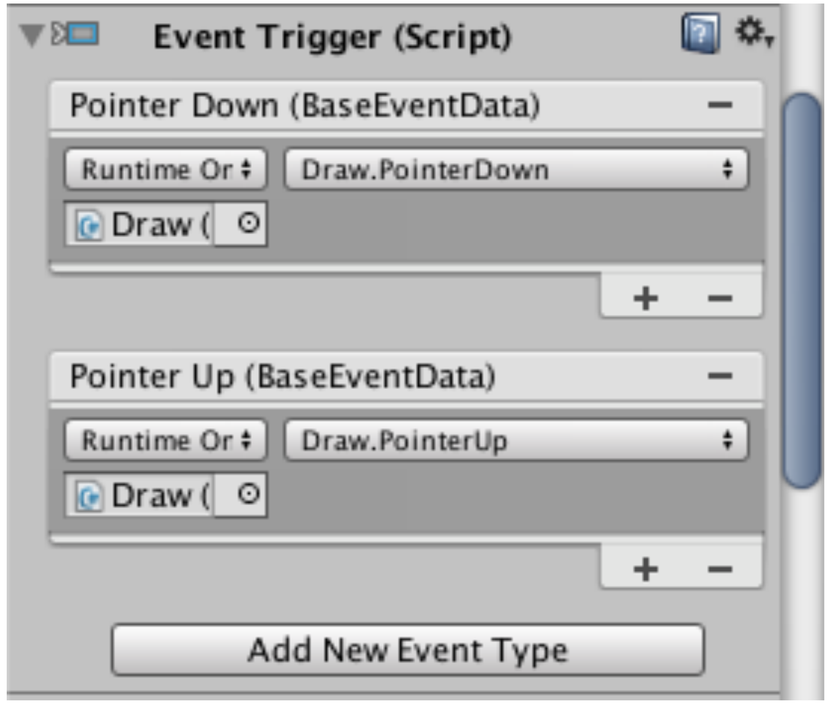
：呼び出す関数




```
34      public void red(){
35          color = Color.red;
36      }
37
```

プログラムの説明(2)

・描画処理




```
65      // Update is called once per frame
66      void Update () {
67          if (Touch) {
68              Transform camera = Camera.main.transform;
69              Ray ray = new Ray (camera.position, camera.rotation *
70                  Vector3.forward );
71              RaycastHit hit;
72              if (Physics.Raycast (ray, out hit, 100.0f)) {
73                  draw (hit.textureCoord * 1024);
74              }
75
76              drawTexture.SetPixels (buffer);
77              drawTexture.Apply ();
78              GetComponent<Renderer> ().material.mainTexture = drawTexture;
```

プログラムの説明(3)


```
65      // Update is called once per frame
66      void Update () {
67          if (Touch) {
68              Transform camera = Camera.main.transform;
69              Ray ray = new Ray (camera.position, camera.rotation *
70                  Vector3.forward );
71              RaycastHit hit;
72              if (Physics.Raycast (ray, out hit, 100.0f)) {
73                  draw (hit.textureCoord * 1024);
74              }
75
76              drawTexture.SetPixels (buffer);
77              drawTexture.Apply ();
78              GetComponent<Renderer> ().material.mainTexture = drawTexture;
```

プログラムの説明(4)

理解していない部分

```
54
55  public void draw(Vector2 p){
56      for (int x = 0; x < 1024; x++){
57          for (int y = 0; y < 1024; y++){
58              if ((p - new Vector2 (x, y)).magnitude < 30){
59                  buffer.SetValue (color, x + 1024 * y);
60              }
61          }
62      }
63  }
64
65  // Update is called once per frame
66  void Update () {
67      if (Touch) {
68          Transform camera = Camera.main.transform;
69          Ray ray = new Ray (camera.position, camera.rotation *
70              Vector3.forward );
71          RaycastHit hit;
72          if (Physics.Raycast (ray, out hit, 100.0f)) {
73              draw (hit.textureCoord * 1024);
74          }
75
76          drawTexture.SetPixels (buffer);
77          drawTexture.Apply ();
78          GetComponent<Renderer> ().material.mainTexture = drawTexture;
```