

Ministerul Educației al Republicii Moldova

Universitatea Tehnică a Moldovei

Catedra Tehnologii Informaționale

RAPORT

Lucrarea de laborator nr.5 *la*
MIDPS

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Dezvoltarea unei aplicatii mobile

- **Visual Studio**
- **Xcode**
- **Android Studio**
- Eclipse
- NetBeans

Prerequisites:

- IDEs: Visual Studio, Xcode, Android Studio, Eclipse, NetBeans
- Limbaje de programare: C#, JavaScript, Objective C, Java, Swift
- Tehnologii si Frameworks: Windows Mobile, iOS, Android

Objective:

- Cunostinte de baza privina arhitectura unei aplicatii mobile
- Cunostinte de baza ale platformei SDK

Conditii Generale:

Se considera ca ai trecut cu succes laboratorul daca ai urmat toti pasii din:

1. [Submission Process](#)
2. Trebuie sa elaborezi un program prototip care il vei arata in timpul laboratorului
3. Ai respectat DL (data limita)

Technical Prerequisites:

- Your application must be developed and tested in SDK included Emulator.
- You probably would like to run your application on real device.
- Your application must support multiple screen resolutions.

Laboratory Requirements:

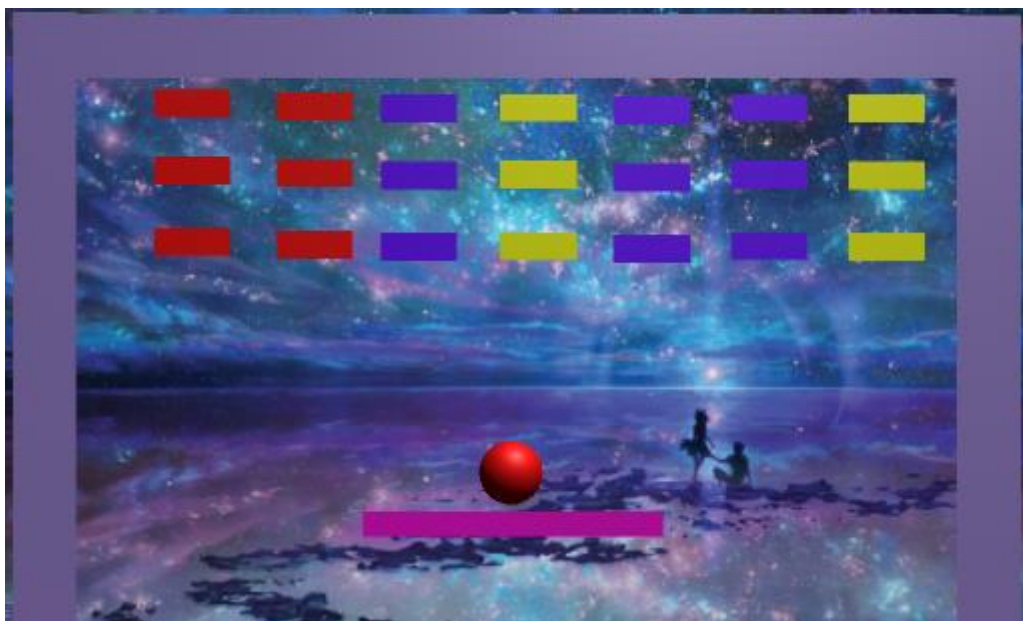
- *Basic Level* (nota 5 || 6) :
 - Realizeaza o aplicatie simpla "Hello world" care va contine 2 butoane care vor afisa 2 pagini diferite, folosind 2 elemente diferite de interactiune
- *Normal Level* (nota 7 || 8):
 - Implimenteaza un simplu ceas sau stopwatch

- *Advanced Level* (nota 9 || 10):
 - Realizeaza o aplicatie care va implimenta tehnica *Pomodoro* **SAU** ○ O alta aplicatie sofisticata la alegere
 - Game
- *Bonus Point*
 - Foloseste libraria cross platform pentru a realiza o aplicatie cross platform (aplicatia poate fi compilata atat pe Android, cit si pe iOS)
 - Folosirea Facebook/Twitter/Google Maps API

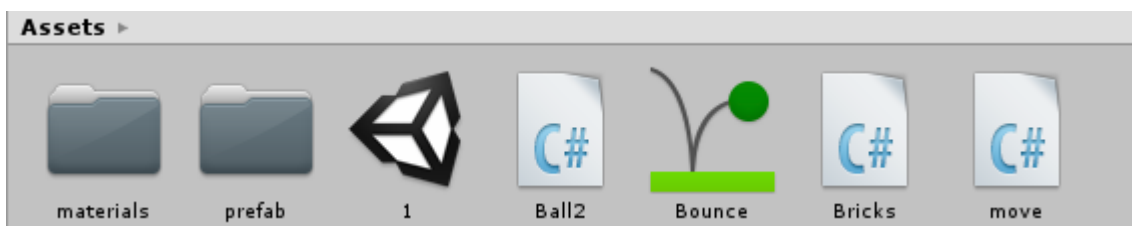
Note: Alege si implimenteaza un singur nivel.

Crearea unui joc(aplicatie) care ruleaza pe Android si IOS:

Interfata Grafica:



Pentru crearea aplicatiei am folosi scripturile care le-am creat in C#:



Game Controller1:

```
0 references
public class Ball2 : MonoBehaviour {
    public float force;
    public Transform ballChecker;
    // Use this for initialization
    0 references
    void Start () {
        // GetComponent<Rigidbody2D>().AddForce(new Vector2(1f, 0.5f) * Time.deltaTime * force);
        transform.position = new Vector2(0, -3.5f);
    }

    // Update is called once per frame
    0 references
    void Update () {
        if (Input.GetKey(KeyCode.Space)) {
            GetComponent<Rigidbody2D>().AddForce(new Vector2(1f, 0.5f) * Time.deltaTime * force);
        }

        if (transform.position.y < ballChecker.transform.position.y) {
            Application.LoadLevel(Application.loadedLevel);
        }
    }
}
```

```
using UnityEngine;
using System.Collections;

0 references
public class Bricks : MonoBehaviour {

    // Use this for initialization
    0 references
    void Start () {

    }

    // Update is called once per frame
    0 references
    void Update () {

    }

    0 references
    void OnCollisionEnter2D(Collision2D col)
    { if(col.gameObject.tag == "ball")
      {
          Destroy(gameObject);
      }
    }
}
```

```

using UnityEngine;
using System.Collections;

0 references
public class move : MonoBehaviour {

    Vector2 position;
    public float speed;
    // Use this for initialization
    0 references
    void Start () {
        position = transform.position;

    }

    // Update is called once per frame
    0 references
    void Update () {
        float moveX = Input.GetAxis("Horizontal");
        position.x += moveX * Time.deltaTime * speed;
        position.x = Mathf.Clamp(position.x, -4.3f, 4.3f);
        transform.position = position;

    }
}

```

Concluzie

In aceasta lucrare de laborator am obtinut cunostintele necesare in mediul de dezvoltare Unity in limbajul C#. In mediul de dezvoltare Unity noi putem crea aplicatii p/u Android, IOS, Windows cit si pe alte platforme. Odata ce am scris codul noi il putem converti atit p/u Android cit si IOS acesta ar fi un avantaj spre deosebire de Android Studio.