



Středoškolská technika 2023

Setkání a prezentace prací středoškolských studentů na ČVUT

„Vývoj počítačových her na příkladu hry Arena of Taryon“

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Arena of Taryon

Maturitní prezentace

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Cíl maturitní práce

Cílem mé práce byl stručný, ale přitom pravdivý a rozsáhlý popis vývoje her, který nabízí můj subjektivní pohled a rady na to, jak správně dosáhnout ideálních vývojářských podmínek, jak si vybrat ideální vývojářské prostředí a programátorský jazyk pro vývoj dané hry.

Práce je spíše určena pro nováčky a začátečníky, ale obsahuje také informace a zajímavosti, které by se mohly hodit i pokročilejším a to z pohledu programování a spolupráce s větší skupinou lidí.

Osnova maturitní práce

1 Úvod

2 Začátky vývoje

3 Game Engine

4 Singleplayer (local) a Multiplayer (online)

5 Váš team

6 Komunikační a Pracovní platformy

7 Arena Of Taryon - Praktická část

8 Závěr

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityEngine.Networking;
using UnityEngine.UI;
using TMPro;
using System.Linq;
using UnityEngine.SceneManagement;

public class CheckForUpdates : MonoBehaviour
{
    public string version;
    public GameObject CheckingForUpdateText;
    public GameObject UpdateText;
    [SerializeField] private TMP_Text TextChange;
    public static string currentversion = "0.0.451";

    IEnumerator Start()
    {
        yield return new WaitForSeconds(0.15f);
        TextChange.text = "Checking for updates...";
        CheckingForUpdateText.SetActive(true);
        UnityWebRequest www = UnityWebRequest.Get("https://arenaoftaryon.tode.cz/api/game_options.php?name=version");
        yield return www.SendWebRequest();
        version = www.downloadHandler.text;

        if (currentversion != version)
        {
            if(Application.internetReachability != NetworkReachability.NotReachable)
            {
                CheckingForUpdateText.SetActive(false);
                UpdateText.SetActive(true);
            }
        }
    }
}
```



Please input your game access key

I have read and agreed to the rules

Access key is too short

ID: 702632807

Print Alpha Build 1.0.15



Please input your game access key

Stored code detected



LOADING

ID: 3284905

Private Alpha Build 0.0.45

Update v.0.0.45

ARENA OF TARYON

NEW

- Daily Run system: fixed character and run seed that change each day, with scoring and ranking system
- A new playable character
- A new Challenge
- 42 new Artifacts
- 2 new Crests
- 2 new Spells
- Additional rewards have been added to all existing Challenges
- Challenges are now sorted by their difficulty level
- Collection screen now shows whether the Curse is Minor or Major
- Block Rate has been removed and replaced with a new stat, Ultimate Charge, that speeds up passive & on-kill Ultimate charge
- Dodge Chance now only evades ranged attacks (beams & projectiles)
- Block Chance now completely negates attacks just like Dodge does, except it's for melee attacks only
- Defense has been readjusted to be an unscaled stat rather than percentage, providing damage reduction based on its value



Changelog



Collection

Total Progress: 93,3%

Enemies Achievements Artifacts Spells Crests Statistics Key Items



Back

All Artifacts

Controls

Move Forward

W

Move Backward

S

Move Left

A

Move Right

D

Primary Fire

LMB

Secondary Fire

RMB

Ability 1

Shift

Ability 2

E

Ultimate

Q

Stats

Tab

Next Wave

Space

Interact

F

Consumable Slot 1

+

Consumable Slot 2

Ě

Consumable Slot 3

Š

Spell

X

Quick Restart

R

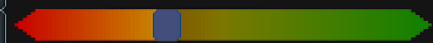
Language English

Audio

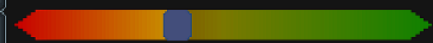
Master Volume



BGM Volume



SE Volume



Misc

- Damage Numbers
- Auto Start Next Wave
- Extended Mastery Descriptions
- Debug Console
- Use System Cursor
- Display Ability Cooldowns

Shaking Intensity



Video

Resolution 1920 x 1080 @ 144Hz

Display Display 1

Screen Mode Exclusive Fullscreen

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Credits

Alex Houk - head developer
Nekohime Yurio - lead developer
Snajpy - character/map artist
Claudio - music producer
KpSonic - balance and feedback

Music

"Darkling", "Eternal Terminal", "Graveyard Shift", "Halls of the Undead", "Malicious", "Midnight Tale",
"Morgana Rides", "Past the Edge", "Tempting Secrets", "Water Lily" Kevin MacLeod (incompetech.com)

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Back

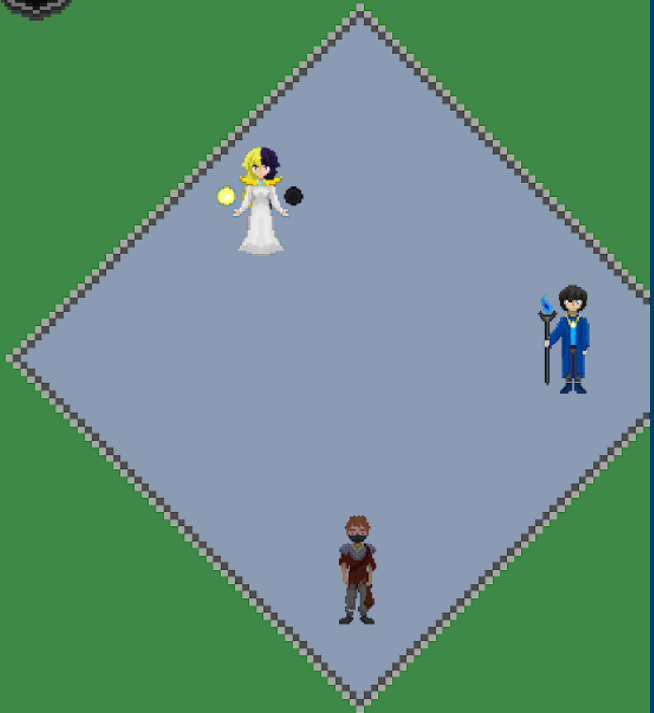
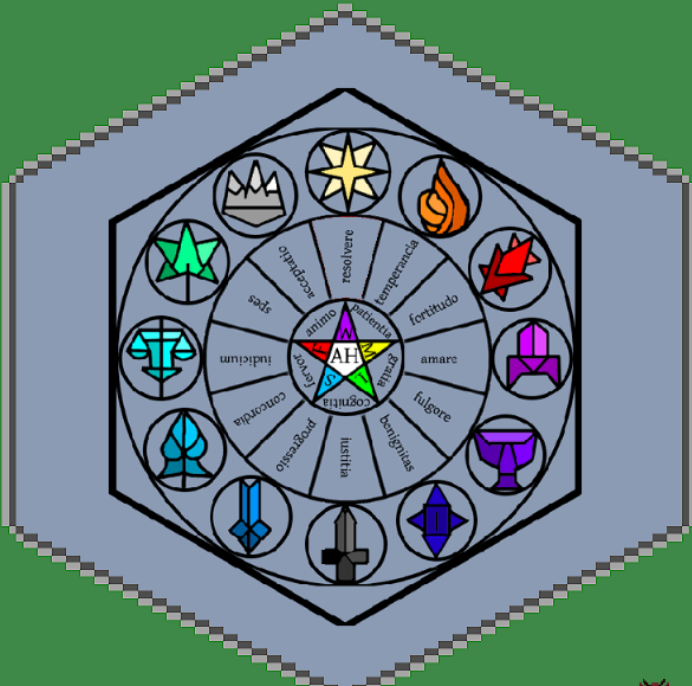


Tab





Tab



Mode Selection

Name: *Evie Faero*

Age: 19

Occupation: *Witches Discipline*

One of the most talented mages from the magic academy. A prodigy rumored to become a very powerful witch in the future with the power affinity for the mighty Phoenix. Able to deliver very powerful attacks to multiple enemies at once while setting them on fire, not letting a single one escape her wrath.



Heart of Fire

Evie is immune to damage from *ignite* and her own Bombstone explosions.



Fireball

Launches a fireball towards the mouse pointer, that explodes upon impact with enemies or obstacles, dealing area damage and *igniting* the primary target. Splash damage rate is 30% of original.



Flame Barrage (Cooldown: Special | Mana: 30 | Max Charges: 3)

Gain a charge of this Ability when killing an enemy with direct [Fireball] hit, or with each 5th hit against Bosses. Fire three [Fireball]s at once with lower damage and increased spread.



Flamethrower (Cooldown: 5s | Mana: 10 (+2 per second)/s)

Evie channels a cone of fire, damaging and *igniting* enemies in front of her. Evie gets pushed back with reactive force while channeling. Use again to stop channeling.



Inferno (Cooldown: 15s | Mana: 50)

Evie creates a fire ring on the ground around her for 3 seconds, setting the area on fire. Enemies in this area take damage and are *ignited*. The longer enemies stay in range, the longer *ignite* effect will last.



Excelsior (Ultimate)

Evie enhances the next ability that she uses, ignoring any of its **initial** costs or requirements, and greatly improving it.

Story

Boss Rush

Training Room

Daily Run

The Tower opens its doors before you. Will you be able to take on this challenge?

STATS

Total Attempts: 7

Times Completed: 0 (0,0% win rate)

Fastest Clear Time: Not Completed

1 enabled

Modifiers

Run seed?

Start



Back

Mastery Info

Challenges

- #1. *Mystery Swap*
- #2. *Back Tracking*
- #3. *Borrowed Time*
- #4. *Darkness Falls*
- #5. *Black Shroud*
- #6. *Good and Evil*
- #7. *Tainted Blood*
- #8. *Blindfolded*
- #9. *Weak Knees*
- #10. *Curse of Cursed*



Curse of Cursed

Difficulty: **Very Hard**

Even in the darkest hour you must stand up straight against the odds.
No matter how hard your journey would be, you must overcome any obstacles.

RULES

- In this Challenge, you'll play as **Ronald**.
- Each and every single Artifact will be Cursed.
- Each Curse that you have increases your Damage by x1.05 and reduces Health by x0.95 (compounding).

GOAL

- Beat Wave 40.

STATS

Total Attempts: 0
Times Completed: 0 (0,0% win rate)
Fastest Clear Time: Not Completed

 Back



Start



0% 0%

4 773 / 4 832

1 812 / 1 812

1 178 / 1 178



Wave 25

5 enemies remaining



163 / 175

32 / 120



ID: 3284905

Press [-] to open Debug Console

10 452 / 10 452

59

0



62 / 100

30 / 30

Q RMB Shift E X

ID: 3284905

Konec prezentace

Děkuji za pozornost