**Team Dragonfruit (C# OOP Course)**

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**Project repository @Github**

https://github.com/Pip3r4o/OOP-Team-Dragonfruit

**General requirements**

- At least 5 interfaces (with one or more implementations) - **11 interfaces**

- At least 15 classes (implementing the application logic) - **more than 25 classes**

- At least 3 abstract classes (with inheritors) - **5 abstract classes**

- At least 1 custom exception class (with usage in your code) - **1 custom exception class**

- At least 3 levels of depth in inheritance - **3 levels**

- At least 1 polymorphism usage

- At least 1 structure - **1 structure**

- At least 1 enumeration - **1 enumeration**

- At least 1 event (with subscribers) - **1 event**

- At least 1 design pattern - **2 Factories (for Decks and for Cards)**

**Optional requirements**

**- Static members (fields, properties, constructor, etc.) - e.g. in the extension method**

**- Constants, generic types, indexers, operators - generic class Deck with an indexer**

**- Lambda expressions and LINQ - yes**

- Implementation of IEnumerable<T>, ICloneable, ToString() override

**- Namespaces - several**

**- User interface (UI) – graphical**

**+ Extension method**

**Trial Of Fortune**



*“News spread as quickly as wildfire throughout the realm about the recently discovered dungeon that promised untold riches to anyone fearless enough who dared pass its threshold. Heroes from all corners of the world have now gathered in a tavern not far from the dungeon, chugging ale after ale and arguing and boasting who’d loot more coin before becoming rat food. Little did these so-called heroes know that once you go in, there’s no getting out. “*

**Basic game rules**

**Encounters** - the adventure is all about encounters – when you advance to the next tile on the game field you flip the top card of the deck – if it’s a **monster** – you fight it, if it’s a **modifier** card – good luck, you are going to need it.

You throw your available (6-sided) dice each time a monster gets in your way. The sum of the numbers on all dice is added as attack power to your hero’s for the duration of the encounter.

When you encounter a monster, the hero’s attack and defense points are matched to those of the monster. If your attack points are equal or greater (>=) than the monster’s defense points – you get the amount of coins indicated on the card. Additionally, if there is a special reward present, you receive it as well. If your attack points are lower than the monster’s defense points, you do not defeat the monster and therefore do not win coins.

A monster deals damage (indicated on the card) if their attack is greater than your hero’s defense power. If a monster has a special modifier and hits you, the negative effect is applied to the player’s hero (**Example**: hero’s attack/defense is permanently lowered by 1 point).

If a hero loses all their health points – the game is over – progress (level, floor, coins collected) is recorded and the player can start a new game.