



IOS

DEVELOPMENT –
ASSIGNMENT 2 –
S3821186 – VO
DAI DUONG

ABSTRACT

VIETNAMESE BLACKJACK BOARD GAME

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Introduce your iOS game.

My iOS board game is a Vietnamese version of the Blackjack card. Even though there are some similarities to the original version, I have made some small modification to the game rules, such as the value of the Ace card being 1 or 10, instead of 1 or 10 or 11 like the original rules.

Why do you choose that topic? Any motivation or inspiration?

The motivation for me to build this game stems from my friends and my family, during the Vietnamese Tet Holiday, we would visit our relatives and play Blackjack game, or when I was hanging out with my friends, we would usually play Blackjack game. And because of that, it is the only card game to which I remember the rule best.

Explain how to play the game? Rules of the game or tips/tricks to play?

The game rules are straightforward and like the original Vietnamese blackjack, I just change the value of the Ace card to 10 or 1, the original version will have the Ace card bears the value 11 too. I remove the value 11 because it would simplify my case calculations.

At the beginning of the game, hereby refer to as Stage 1:

We will receive 2 cards, then we evaluate the total cards we have for card value. It is classified into 2 cases: Special cases and Normal cases

Special cases are where we have Double Ace, One Ace + (King/Jack/Queen). Double Ace in this game is called "Xi Ban", and One Ace with King/Jack/Queen is called "Xi Dach". The main point of stage 1 is, if we hit these special cases, we need to deal our card immediately.

If we do not hit these special cases, then we can choose to deal or pull more card, then move to stage 2

Stage 2 are when we pull more than 2 cards, or we did not hit the special cases from the stage 1.

In the stage 2, we will try to score the highest point by pulling more card or stop when we desire, if we have 5 cards and their total point is smaller or equals 21, it is considered a "Ngu Linh". If not, then we just need to try avoiding hitting the lose case, which is when our card value exceeds 21 points, in this game, it is called "Quach".

The rank value for cards can be illustrated below:

Xi Ban > Xi Dach > Ngu Linh > Numbers

The game will end when both side choose the deal the card. Both side can only have 5 card maximum.

What are the main features and extra features you have done?

The main features of the game:

- + Normal AI agent
- + Animation
- + Saving features
- + Dark mode / Light mode
- + Options to toggle background music
- + Reset match
- + Leaderboard
- + User's action sound effect

For each feature, explain briefly how you do it?

a. Normal AI agent

The AI that I implemented is relatively basic, it will try to hit the card point within the range of 15 and 21, it will deal the card when the range is satisfied. If it hit the special cases, it will deal immediately, I try to think of how we can code the AI that bears many resemblances with human. If it is still not hit the range, then the AI will keep pulling more cards until the condition is met.

b. Animation

The action of the user and the AI will have animation supported, when both sides are pulling the cards, the player can see the card being sent to them slowly.

c. Saving features

Regarding the user's data, I allow them to press the save button when they finish the match with the AI. It is incorporate with the CoreData feature of iOS for better storage space compared to User's Default.

The users can also delete the saved game data should they wish to do so.

d. Dark mode and Light mode

This is to assist users to gain better visuals when they are playing in the dark environment, as the light mode can strain their eyes in long period

e. Reset match

When the player deals the card and the final decision is given out, they can reset the game, all the cards from the players and the computer then will be withdrawn from their deck and return to the game's master deck and will be shuffled again for randomness.

f. Leaderboard

The game's saved data will be displayed in the leaderboard options inside the menu of the game. Many players can visit this option to see their past

performance, if they wish to delete the data, they can do so by swiping from right to left, a red delete button is displayed, and player just need to press to confirm.

g. Actions sound effect for user's

When player take actions, for instance, pulling more cards or deal the card, a respective sound effect is played to notify the user's they are working with that button.

Screenshots of different views of the app.

Menuview.swift

11:20



Vietnamese BlackJack

Play Game

LEADERBOARD

Settings

How to play ?

Leaderboardview.swift

11:26



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LEADER BOARD VIEW HERE
Username win count -- Computer win count

Test 1 -- 2 Computer

-- 2 Computer

Delete

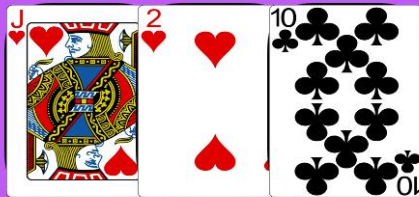
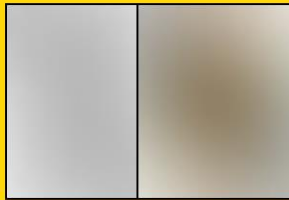
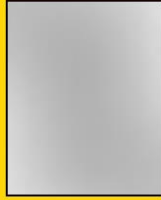
Contentview.swift

11:27



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computer win: 0 user win: 1



VO DAI DUONG point: Quach

Pick more

Deal

HowToPlayView.swift

11:20



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GAME RULES

Stage 1: When game start

User and computer will be given 2 cards, if either you or computer hit the special case, or Quach, you need to press deal

Stage 2: After pulling more than 2 cards

To win, you need to be higher than computer in terms of card value

The card value will have normal number case and special case

If cards hit value greater than 21, it is considered a straight defeat

Special case:

Double Ace, also called Xi Ban, highest val...

One Ace and one (king or queen or jack), also called Xi Dach, 2nd highest

If you have 5 cards and their value smaller than 21, it is called Ngu Linh, 3rd highest

The rest are cards that based on numbers value

If cards exceed 21 points, it is called Quach, means lose

Card value

Ace = 10 or 1

Queen or Jack or King = 10

Numbers card = self


SettingsView.swift

11:20



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Game settings

Light mode 

Dark mode 

MUSIC OFF

For any external libraries/API then clear and informative step by step instructions must be provided to setup your project to run it on Xcode.

I do not have any API or external libraries used

Possible links to animated picture/GIF/Video of the app for easy visualization.

