

Project Assignment

Course:	ITSE 2402		
Term:		Mode:	Face-to-Face
Instructor:	Abass Alamnehe		
Purpose:	Project VI—Blackjack Game		

Requirement

- Use Microsoft Visual Studio Code or any tool that you think is appropriate for the project.
- To submit, you should ZIP the project with proper folder structure.
- Submit your work on <http://eagleonline.hccs.edu> by due date.

Resources

HTML Documentation

<https://developer.mozilla.org/en-US/docs/Learn/HTML>

Bootstrap

<https://getbootstrap.com/docs/4.1/getting-started/introduction/>

JavaScript Reference

<https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference>

TypeScript

<https://www.typescriptlang.org/docs/home.html>

Angular

<https://angular.io/>

Node.js

<https://nodejs.org/en/>

Apache Web Server

Project: Blackjack Game

A **blackjack** is a game played with cards. It involves one **dealer** and **one or more players**. In the game, each player bets against the dealer. Initially, the dealer passes one card at a time totaling two from left to right including the dealer.

The game objective is to assemble cards with the total value as close as **21** or just **21**. If the player hand goes over 21, the player loses the bet (**bust**). The player can hit (**draw**) as many cards as needed until "**natural or normal blackjack**", "**stand**", or "**bust**" is reached. If the player and the dealer's hands end up with the same value, it is said to be a "**tie**" or "**push**"; otherwise, the player wins if the hand of the dealer is less than that of the player.

Blackjack may be played with one deck or more cards. One deck consists of **52 cards** and their values are classified as shown below.

- **Aces** represent either 1 or 11
- Cards from 2-10 represent their respective values.
- **Queens, Kings, and Jacks** each representing 10

There are variations in blackjack games. Some of the rules depend on the type of game.

Your requirement in this project is to write a blackjack game using C++. The project involves two phases.

1. Problem specification document, which must be submitted one week after the project assignment.
2. Implementation of the project, which must be submitted two weeks after the project assignment.

Useful Resource

Blackjack

<https://en.wikipedia.org/wiki/Blackjack>

Simulate Blackjack Game

<https://www.beatblackjack.org/en/simulate/>

Blackjack Doc

<http://blackjackdoc.com/>

Design Consideration

When you design your website, take into consideration the following factors.

- This web application should be designed using the **Angular** framework.
- The page is friendly to various devices. Ideally, to design an effective web page, using **HTML**, **CSS**, **JavaScript**, and at least, one client-side framework is required. Since this is our second project however, we will limit ourselves to **HTML**, **CSS**, and **Bootstrap**. An example of a sample page with Bootstrap is provided in Module III. Better yet, you will find a lot of examples on Bootstrap official site:

<https://getbootstrap.com/>.

- You should use an original **look & feel** on the page layout, color theme, and font selection that are appropriate to the contents.
- Generally, global hyperlinks are placed on the header and footer of a page. The header should feature those links that capture the structure of the website. The **Bootstrap** framework does provide excellent header style that you can use.

Requirements

- Do not use any **3rd party package** for this project.
- Your page should be designed using the **Bootstrap** framework. This doesn't necessarily exclude other web client frameworks if you would like to do so.
- Ensure that the JavaScript code is formatted and documented.
- Please format and document your work as properly as possible.
- Submit your work on the course site in zip format. All images and supplementary assets should be included.