

## BLACKJACK (MAIN FUNCTION)

- Create & shuffle deck
- Deal 2 cards to player & dealer
  - Print player's cards/score & dealer's 1<sup>st</sup> card
- Det. if Blackjack or Push
- Ask player to hit or stand
  - Player hits:
    - Deal card, calc score, det. if winner/loser/hit or stand again
  - Player stands → Dealer's turn:
    - Print dealers card and score
    - If score < 17, hit (deal card, calc new score, det. winner/loser/hit)
    - If score > 17, stand
- Reveal winner, loser, push, bust

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- Call to local functions
- *if else* stmts to det. players/dealers score, #cards in hand
- *Nested if else* stmts to det. Winner/Loser, Push, Bust, Charlie
- *while* loop to control inputs

## LOCAL FUNCTIONS

### INITDECK

INPUT	OUTPUT
#decks to create	#cards created
Each card structure (deck(s)) has fields: Suit, Value, Number	

### SHUFFLE

INPUT	OUTPUT
deck(s) of cards to shuffle	Shuffled deck(s)

### DEALCARD

INPUT	OUTPUTS
Shuffled deck(s)	1) Dealt card 2) Deck with dealt card removed

### CALCSCORE

INPUT	OUTPUT
Cards in either dealer's or player's hand	Either the player's or dealer's score

### PRINTCARD

Prints value & suit of cards in either dealer's or player's hand

ALL LOCAL FNS:  
*if else* stmts &  
*nargin* to control  
function inputs

- *struct* to create decks
- *for* stmts & indexing to fill cards correctly
- *repmat* to create new structs

*for* loop &  
indexing to  
shuffle  
cards

Index card  
structure  
and use  
empty  
brackets to  
delete cell

- *sum* function to sum Number field
- *for* loop to count #Aces
- *while* loop to calc score & #Aces

*for* loop and  
indexing to  
print cards  
currently in  
dealers/  
players hand

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