HW2

Black Jack probabilities

Dear students in your second homework I want you to model Black Jack classic card game.

You can read rules here: https://www.officialgamerules.org/blackjack

Goals of this HW is to train your skills of using r-base objects and to remind the basics of probability theory.

We have a csv file with a classic 52 card deck:

```
deck <- read.csv('deck.csv')
head(deck)
```

```
##    face   suit value
## 1  king spades    10
## 2 queen spades    10
## 3  jack spades    10
## 4   ten spades    10
## 5  nine spades     9
## 6 eight spades     8
```

I want you to model a game with shown percentage of winning.

Assume that casino has 4 full decks (208 cards).

Game starts when dealer shuffle all cards and give 2 card for you and 2 for himself.

To simplify task dealer will always have 2 cards and only you can get additional cards. Second thing lets assume that Ace has always 1 point.

You win if your card sum is more or equal than dealers card sum.

If your card sum more than 21 you loose.

each turn I want you to print these game state:

> Dealers hand:
>
> king spades 10
>
> seven hearts 7
>
> sum 17
>
> Your hand:
>
> king spades 10
>
> two hearts 2
>
> six spades 6
>
> sum 18

chances 100%

So you need to:

- create suitable objects for casino deck, dealer hand, and your hand.
- implement shuffle_deck() function
- implement start_game() function that shuffles deck, deals 2 cards for you and dealer. and prints state
- implement deal() function that deals you a card and prints state
- implement stop_game() function that prints result: win or loose

After implementation please show two examples of working game and knit rmd to .pdf