

Week 9



User-Defined Objects
(Simple Blackjack Game)

Tasks for Today!

Memento2

- Rewrite Memento (lab 6, remember?) using *user-defined object*

Simple Blackjack

- Refer to lecture #9
- Rules of Black jack
 - Winner can be either a player or a dealer
 - Any of them will lose the game with score higher than 21
 - Any of them will win the game with higher score than the other
 - A player gets as many cards as he/she wants
 - A dealer gets more cards until the sum of its cards is less than 17

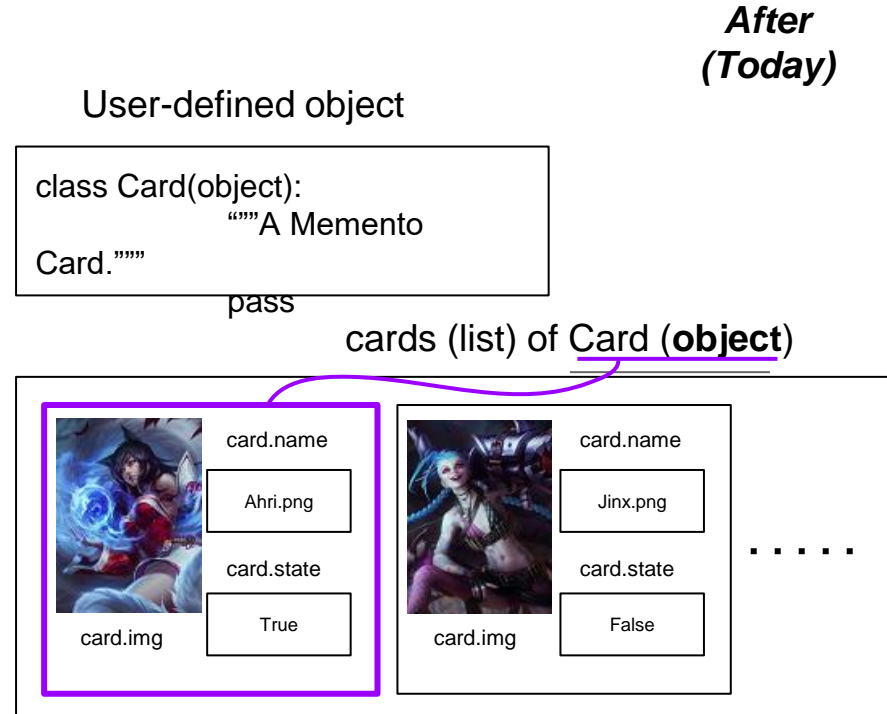
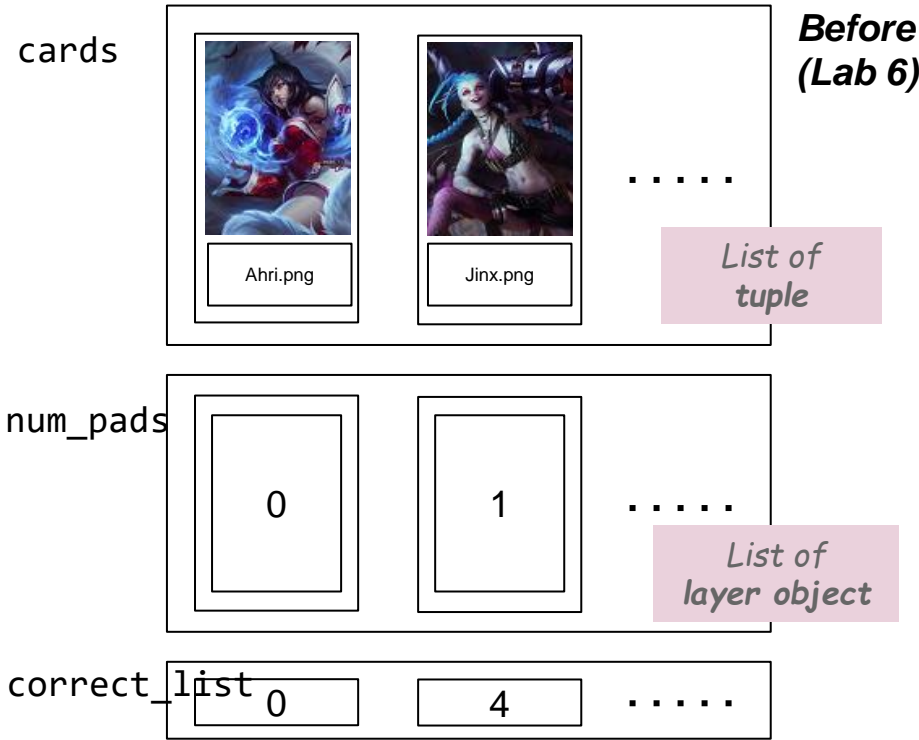
Hidden Task

Task 1 | Memento2


- Rewrite **Memento** using *user-defined objects*.
- Tasks
 - Copy **Memento**'s code that you wrote few weeks ago.
 - Define a **Card** class.
 - Convert all elements in **cards** list from tuple to **Card** object. This will make **cards** a list of **Card** object.
 - Delete all use of **correct_list**.
 - Change the way of accessing an element of the **cards** list.

Task 1 | Memento2

- Convert the code from **Tuple version** to **User-defined Object version**.



Task 2 | Black Jack

- Understand the main() function
 - Have to define Card class
 - has 5 attributes
 - Implement five functions. Refer to the requirements for each function definition below and complete the following functions that satisfy the requirements.
 - **create_deck()**
 - **hand_value(hand)**
 - **card_string(card)**
 - **ask_yesno(prompt)**
 - **draw_card(dealer, player)**
- 
- **suit:** (Clubs, Diamonds, Hearts or Spades)
 - **face:** (Ace, 2, ..., Jack, Queen, or King)
 - **value:** value of the card
 - **image:** image object for the card
 - **state:** state of a card (hidden or not)

Task 2 | Black Jack

Initial prompt

Welcome to Black Jack 101!

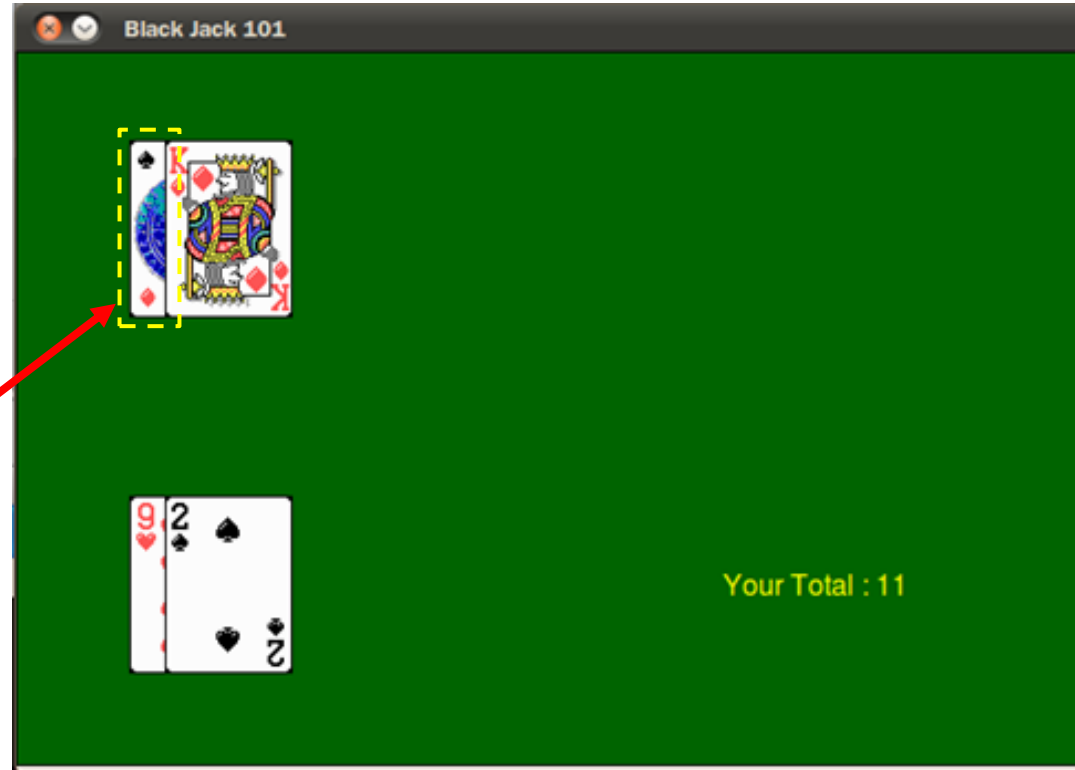
You are dealt a 9 of Hearts.
Dealer is dealt a hidden card.
You are dealt a 2 of Spades.
Dealer is dealt a King of
Diamonds.
Your total is 11.

Dealer

*Hidden
Card*

Player

Initial two drawers



Task 2 | Black Jack

Report an error if the input is invalid.

Would you like another card?

(y/n) **ne**

I beg your pardon!

Would you like another card?

(y/n) **y**

You are dealt **a 4 of Hearts.**

Your total is 15.

Would you like another card?

(y/n) **n**

Type “y” if you want to get another card.

Type “n” otherwise.



Task 2 | Black Jack

When your turn is finished, the dealer draws cards until the score reaches 17.

The dealer's hidden card was a
Queen of Spades.

Your total is 15.
The dealer's total is 20.
You lost!

Play another round? (y/n) **n**

Show your scores as well as dealer's
and decide who wins. The game should
go on unless typed "n".

open



questions?