ADT'S

ADT customerBasket

Push

Pop

TOP (Game)

Game

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{inv: Top will always be the element to get. Top is the last input element}

Name	Operation type	Input	Output
customerBasket	Creator		customerBasket
push	Modifier	Game	customerBasket
pop	Analyzer		Game

---

customerBasket ():
"creates a new customerBasket with no games"
{Pre: TRUE}
{Post: customerBasket = null}

---

push (Game game):
"Inserts a new element and sets it as top"
{Pre: customerBasket is created}
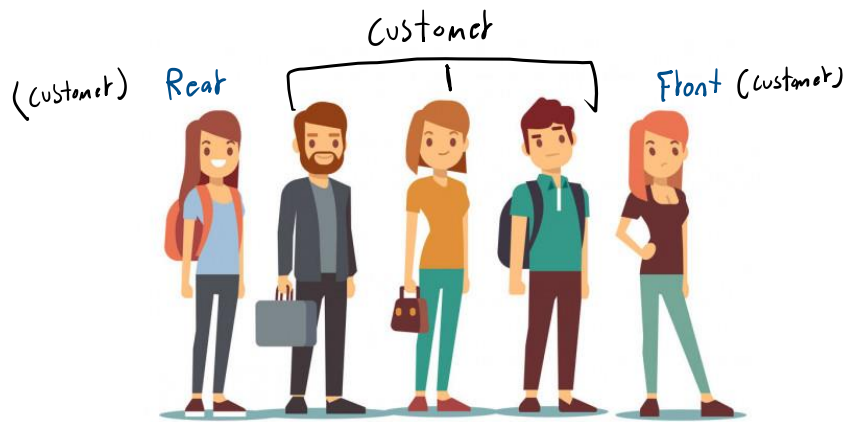{Post: customerBasket = <other games>…game, top= game}

---

pop ():
"Returns the game that was top
{Pre: customerBasket must have at least one game}
{Post: game = top, customerBasket = <other games> V customerBasket = null}

ADT customerQueue

Customer

(Customer) Rear   Front (Customer)

{inv: The first customer to enter will be the front and will be the first to leave. When this happens, the customer who has entered immediately after will become the front.}

Name	Operation type	Input	Output
customerQueue	Creator		customerQueue
offer	Modifier	customer	customerQueue
poll	Modifier/Analyzer		customer

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customerQueue ():
"Creates a new customerQueue with no customers"
{Pre: TRUE}
{Post: customerQueue = null}

---

offer (Customer newCustomer):
"Inserts a new element"
{Pre: CustomerQueue is created}
{Post: CustomerQueue = newCustomer ∨ CustomerQueue= <Other customers>…newCustomer, rear = newCustomer}

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poll ():
"Returns the customer that was front"
{Pre: customerQueue t must have at least one customer}
{Post: customer = front, customerQueue = null ∨ customerQueue = <Other customers – front> }

ADT shelve

<Inv: For each gameSpace there is an id that indicates which games can go in it. >
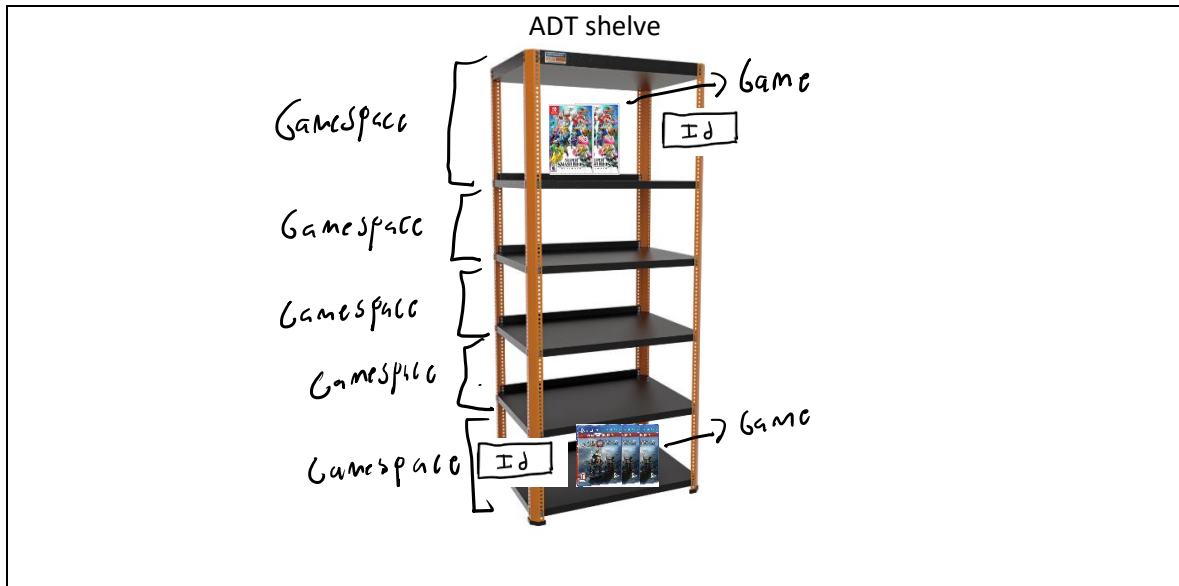
Name	Operation type	Input	Output
shelve	Creator		shelve
insert	Modifier	game	shelve
search	Analyzer	id	game
Delete	Modifier	id	shelve

shelve (int m):
"Creates a new shelve with m gamespaces but no games"
{Pre: TRUE}
{Post: shelve = null}

insert(Id id, Game newGame):
"Inserts a new game for a gamespace"
{Pre: shelve is initialized}
{Post: A game is added to the gamespace with the specified id }

search (Id id):
"Returns a game of the gamespace with the specified id"
{Pre: shelve is initialized}
{Post: returns the requested game }

delete (Id id):
"Deletes a game of the gamespace with the specified id"
{Pre: shelve is initialized}
{Post: Deletes the requested game }