Operation Contracts

Aa Name	≡ Content
Operation	successfulPurchaseTicket(int: ticketID, int: userID, object: paymentDetails)
Cross References	• **ticketID**: The unique identifier of the ticket to be purchased. • **userID**: The unique identifier of the user making the purchase. • **paymentDetails**: An object containing payment information such as card number, expiration date, etc.
Preconditions	1. The `ticketID` corresponds to a valid and existing ticket in the system. 2. The `userID` corresponds to a valid and registered user in the system. 3. The ticket associated with the `ticketID` is available for purchase (not already sold or reserved). 4. The `paymentDetails` provided are valid and the payment method has sufficient funds/credit to cover the ticket price. 5. The user has agreed to any terms and conditions required for the ticket purchase.
Postconditions	1. The ticket status is updated to "sold" or "reserved". 2. The ticket's ownership is transferred to the user associated with the `userID`. 3. The payment is processed successfully, and the payment details are recorded in the system. 4. A purchase confirmation is sent to the user (e.g., via email or in-app notification). 5. The user's purchase history in the system is updated to include the details of this transaction. 6. The inventory of available tickets in the system is reduced by one, or that specific ticketID is updated as sold
Operation	successfulLogin(int: userID, string: userPassword)
Cross References	• **userID:** The username provided by the user to login • **userPassword:** The password created by the user to login.
Preconditions	1. The `userID` corresponds to a valid and registered user in the system. 2. The `userPassword` corresponds to the password associated with the given `userID`.
Postconditions	1. If login credentials are valid the user gains access to their account. 2. If unsuccessful an error message is displayed
Operation	userNameRegistration(int: userID, string: userPassword, string: name, string: email)
Cross References	• **userID**: The unique identifier of the user. • **userPassword**: password for the given user. • **name:** The full name of the user. • **email:** email provided by the user.
Preconditions	1. The user registration process is initiated by a new user. 2. The system is accessible and operational.

Aa Name	≡ Content
Postconditions	1. If successful, the user's account is created. The user can login 2. If unsuccessful, an error message is displayed. Registration fails
Operation	createPassword(int: userID, string: userPassword)
Cross References	• **userID:** The username provided by the user to login • **userPassword:** The password provided by the user to login.
Preconditions	1. The `userPassword` is a length of 8-16 characters, contains two symbols, and one lower and uppercase character.
Postconditions	1. The `userPassword` is generated for the user.
Operation	searchEvents(object: events, dateRange: date, string: location, string: category)
Preconditions	1. Database includes events 2. User has permission to search `events` 3. Search criteria is defined for users.
Postconditions	The operation provides the user with a list of appropriate events
Operation	processPayment(int: paymentAmount, paymentMethod: string)
Cross References	• **paymentAmount:** The amount owed • **paymentMethod:** Paypal, Visa, etc.
Preconditions	1. The user initiating the payment has a valid account or payment method registered. 2. Payment details, including the amount and recipient, are provided.
Postconditions	1. If successful, payment is processed and confirmed 2. if unsuccessful an error message is displayed,