ERC721

Private:
- _name: string
- _symbol: string
- _owners: mapping(uint256=>address)
- _balances: mapping(address=>uint256)
- _tokenApprovals: mapping(uint256=>address)
- _operatorApprovals: mapping(address=>mapping(address=>bool))

Private:
- _checkOnERC721Received(from: address, to: address, tokenId: uint256, data: bytes): bool

Internal:
- _baseURI(): string
- _safeTransfer(from: address, to: address, tokenId: uint256, data: bytes)
- _ownerOf(tokenId: uint256): address
- _exists(tokenId: uint256): bool
- _isApprovedOrOwner(spender: address, tokenId: uint256): bool
- _safeMint(to: address, tokenId: uint256)
- _safeMint(to: address, tokenId: uint256, data: bytes)
- _mint(to: address, tokenId: uint256)
- _burn(tokenId: uint256)
- _transfer(from: address, to: address, tokenId: uint256)
- _approve(to: address, tokenId: uint256)
- _setApprovalForAll(owner: address, operator: address, approved: bool)
- _requireMinted(tokenId: uint256)
- _beforeTokenTransfer(from: address, to: address, uint256, batchSize: uint256)
- _afterTokenTransfer(from: address, to: address, firstTokenId: uint256, batchSize: uint256)

Public:
- constructor(name_: string, symbol_: string)
- supportsInterface(interfaceId: bytes4): bool
- balanceOf(owner: address): uint256
- ownerOf(tokenId: uint256): address
- name(): string
- symbol(): string
- tokenURI(tokenId: uint256): string
- approve(to: address, tokenId: uint256)
- getApproved(tokenId: uint256): address
- setApprovalForAll(operator: address, approved: bool)
- IsApprovedForAll(owner: address, operator: address): bool
- transferFrom(from: address, to: address, tokenId: uint256)
- safeTransferFrom(from: address, to: address, tokenId: uint256)
- safeTransferFrom(from: address, to: address, tokenId: uint256, data: bytes)

<<Interface>> IERC721

External:
- balanceOf(owner: address): (balance: uint256)
- ownerOf(tokenId: uint256): (owner: address)
- safeTransferFrom(from: address, to: address, tokenId: uint256, data: bytes)
- safeTransferFrom(from: address, to: address, tokenId: uint256)
- transferFrom(from: address, to: address, tokenId: uint256)
- approve(to: address, tokenId: uint256)
- setApprovalForAll(operator: address, _approved: bool)
- getApproved(tokenId: uint256): (operator: address)
- isApprovedForAll(owner: address, operator: address): bool

Public:
- <<event>> Transfer(from: address, to: address, tokenId: uint256)
- <<event>> Approval(owner: address, approved: address, tokenId: uint256)
- <<event>> ApprovalForAll(owner: address, operator: address, approved: bool)

ERCX

Internal:
- _layaways: mapping(uint256=>LoanInfo)
- _layawayApprovals: mapping(uint256=>address)
- _rentals: mapping(uint256=>TokenRentals)
- _subrentLevels: mapping(uint256=>mapping(address=>uint256))
- _rentalApprovals: mapping(uint256=>mapping(address=>address))

Internal:
- _beforeTokenTransfer(from: address, to: address, firstTokenId: uint256, batchSize: uint256)

Public:
- <<modifier>> onlyLayawayedToken(tokenId: uint256)
- <<modifier>> onlyRentedToken(tokenId: uint256)
- constructor(name_: string, symbol_: string)
- startLayaway(tokenId: uint256, to: address, deadline: uint256)
- startRental(tokenId: uint256, to: address, deadline: uint256, allowSubrental: bool, allowTransfers: bool)
- startSubrental(tokenId: uint256, to: address, deadline: uint256) <<onlyRentedToken>>
- updateLayaway(tokenId: uint256, deadline: uint256) <<onlyLayawayedToken>>
- updateRental(tokenId: uint256, deadline: uint256, provider: address) <<onlyRentedToken>>
- endLayaway(tokenId: uint256, paymentCompleted: bool)
- endRental(tokenId: uint256, provider: address) <<onlyRentedToken>>
- approveLayawayControl(to: address, tokenId: uint256)
- approveLayawayTransfer(to: address, tokenId: uint256) <<onlyLayawayedToken>>
- approveRentalTransfer(to: address, tokenId: uint256) <<onlyRentedToken>>
- approveRentalControl(tokenId: uint256, to: address)
- getLayawayApproved(tokenId: uint256): (approved: address)
- approveRentalControl(tokenId: uint256, to: address)
- getRentalApproved(tokenId: uint256, approver: address): (approved: address)
- getLayawayProvider(tokenId: uint256): (provider: address) <<onlyLayawayedToken>>
- getLayawayDeadline(tokenId: uint256): (deadline: uint256) <<onlyLayawayedToken>>
- getLayawayOwnershipTransferApproved(tokenId: uint256): (approved: address) <<onlyLayawayedToken>>
- getLayawayedTokenTransferApproved(tokenId: uint256): (approved: address) <<onlyLayawayedToken>>
- getRentalDeadline(tokenId: uint256, provider: address): (deadline: uint256) <<onlyRentedToken>>
- rentalExists(tokenId: uint256, provider: address): (exists: bool)
- isSubrentalAllowed(tokenId: uint256): (subrentalAllowed: bool) <<onlyRentedToken>>
- isRentalTransferAllowed(tokenId: uint256): (transferAllowed: bool) <<onlyRentedToken>>
- getRentalOwnershipTransferApproved(tokenId: uint256): (approved: address) <<onlyRentedToken>>
- getRentedTokenTransferApproved(tokenId: uint256): (approved: address) <<onlyRentedToken>>
- getRentals(tokenId: uint256): (rentals: RentalInfo[]) <<onlyRentedToken>>
- getSubrentLevel(tokenId: uint256, provider: address): (subrentLevel: uint256) <<onlyRentedToken>>
- isLayawayed(tokenId: uint256): bool
- isRented(tokenId: uint256): bool
- isSubrent(tokenId: uint256, provider: address): (subrent: bool)
- transferLayawayedToken(to: address, tokenId: uint256) <<onlyLayawayedToken>>
- transferLayawayOwnership(to: address, tokenId: uint256) <<onlyLayawayedToken>>
- transferRentedToken(to: address, tokenId: uint256) <<onlyRentedToken>>
- transferRentalOwnership(to: address, tokenId: uint256) <<onlyRentedToken>>
- redeemRentedToken(tokenId: uint256) <<onlyRentedToken>>
- transferFrom(from: address, to: address, tokenId: uint256)
- safeTransferFrom(from: address, to: address, tokenId: uint256)
- safeTransferFrom(from: address, to: address, tokenId: uint256, data: bytes)
- approve(to: address, tokenId: uint256)
- supportsInterface(interfaceId: bytes4): bool

<<Interface>> IERCX

External:
- startRental(tokenId: uint256, to: address, deadline: uint256, allowSubrental: bool, allowTransfers: bool)
- startSubrental(tokenId: uint256, to: address, deadline: uint256)
- updateRental(tokenId: uint256, deadline: uint256, provider: address)
- endRental(tokenId: uint256, provider: address)
- transferRentedToken(to: address, tokenId: uint256)
- transferRentalOwnership(to: address, tokenId: uint256)
- redeemRentedToken(tokenId: uint256)
- approveRentalControl(tokenId: uint256, to: address)
- approveRentalTransfer(to: address, tokenId: uint256)
- getRentalApproved(tokenId: uint256, approver: address): (approved: address)
- getRentalDeadline(tokenId: uint256, provider: address): (deadline: uint256)
- isSubrentalAllowed(tokenId: uint256): (subrentalAllowed: bool)
- isRentalTransferAllowed(tokenId: uint256): (transferAllowed: bool)
- getRentalOwnershipTransferApproved(tokenId: uint256): (approved: address)
- getRentedTokenTransferApproved(tokenId: uint256): (approved: address)
- getRentals(tokenId: uint256): (rentals: RentalInfo[])
- startLayaway(tokenId: uint256, to: address, deadline: uint256)
- updateLayaway(tokenId: uint256, deadline: uint256)
- endLayaway(tokenId: uint256, paymentCompleted: bool)
- transferLayawayedToken(to: address, tokenId: uint256)
- transferLayawayOwnership(to: address, tokenId: uint256)
- approveLayawayControl(to: address, tokenId: uint256)
- approveLayawayTransfer(to: address, tokenId: uint256)
- getLayawayApproved(tokenId: uint256): (approved: address)
- getLayawayProvider(tokenId: uint256): (provider: address)
- getLayawayDeadline(tokenId: uint256): (deadline: uint256)
- getLayawayOwnershipTransferApproved(tokenId: uint256): (approved: address)
- getLayawayedTokenTransferApproved(tokenId: uint256): (approved: address)

Public:
- <<event>> RentalUpdate(tokenId: uint256, provider: address, receiver: address, deadline: uint256)
- <<event>> RentalTermination(tokenId: uint256, provider: address, receiver: address)
- <<event>> RentalApproval(approver: address, approved: address, tokenId: uint256)
- <<event>> RentedTokenTransferApproval(approver: address, approved: address, tokenId: uint256)
- <<event>> RentalOwnershipTransferApproval(approver: address, approved: address, tokenId: uint256)
- <<event>> RentalOwnershipTransfer(tokenId: uint256, from: address, to: address)
- <<event>> RentedTokenTransfer(tokenId: uint256, from: address, to: address)
- <<event>> RentedTokenRedemption(tokenId: uint256, from: address, to: address)
- <<event>> LayawayUpdate(tokenId: uint256, from: address, to: address, deadline: uint256)
- <<event>> LayawayTermination(tokenId: uint256, provider:address, receiver:address paymentCompleted: bool)
- <<event>> LayawayApproval(approver: address, approved: address, tokenId: uint256)
- <<event>> LayawayedTokenTransferApproval(approver: address, approved: address, tokenId: uint256)
- <<event>> LayawayOwnershipTransferApproval(approver: address, approved: address, tokenId: uint256)
- <<event>> LayawayOwnershipTransfer(tokenId: uint256, from: address, to: address)
- <<event>> LayawayedTokenTransfer(tokenId: uint256, from: address, to: address)

<<struct>> LayawayInfo

- provider: address
- deadline: uint256
- providerApproved: address
- receiverApproved: address

<<struct>> RentalInfo

- provider: address
- deadline: uint256

<<struct>> TokenRentals

- rentals: RentalInfo[]
- providerApproved: address
- receiverApproved: address
- allowSubrental: bool
- allowTransfers: bool