

(GAD170) - Technical Specifications

Gamemode Manager Script:

GamemodeManager → GetAllReferences()

- Inputs
 - npcManagerRef
 - uiManagerRef
- Outputs
 - npcManagerRef
 - uiManagerRef
- Description
 - npcManagerRef is set to NPCManager component
 - uiManagerRef is set to UIManager component

GamemodeManager → AddNewCrewMemberToList(string firstName, string lastName, string hobby)

- Inputs
 - firstName
 - lastName
 - hobby
- Outputs
 - activeCrewMembers
- Description
 - firstName, lastName & hobby string parameter variables are added to activeCrewMembers as one index in the list

GamemodeManager → RecruitCrewMember()

- Inputs
 - npcManagerRef
 - Local chosenHobbyToAttack
 - humanHobbies
 - Local membersToRemove
 - activeCrewMembers
 - Local firstName
 - Local lastName
 - Local hobby
 - generatedFirstName
 - generatedLastName
 - chosenHobby
- Outputs
 - chosenHobbyToAttack
 - membersToRemove
 - activeCrewMembers
 - Local firstName
 - Local lastName
 - Local hobby

- Description
 - If chosen hobby in NPCManager class is equal to any of the alien hobbies in alienHobbies list
 - Local chosenHobbyToAttack is set to a random human hobby from humanHobbies list in NPCManager class
 - Call RemoveInfoFromCrewBoard with input parameter variable (chosenHobbyToAttack)
 - Local membersToRemove (list string firstName, string lastName, string hobby) is declared
 - For each loop which loops through each member in activeCrewMembers list
 - If member of type hobby is equal to chosenHobbyToAttack
 - Add member to membersToRemove list
 - For each loop which loops through each member in membersToRemove list
 - Gets members in membersToRemove list & removes them from activeCrewMembers list
 - Call ChooseNewCrewMember() from NPCManager class
 - Call SetCrewPortfolio with input parameter variables (npcManagerRef of type generatedFirstName, npcManagerRef of type generatedLastName, npcManagerRef of type chosenHobby) from UIManager class
 - Else
 - Local firstName is set to NPCManager of type generatedFirstName
 - Local lastName is set to NPCManager of type generatedLastName
 - Local hobby is set to NPCManager of type chosenHobby
 - Call AddNewCrewMemberToList with input parameter variables (firstName, lastName, hobby)
 - Call AddInfoToCrewBoard with input parameter variables (firstName, lastName, hobby) from UIManager class
 - Call ChooseNewCrewMember() from NPCManager class
 - Call SetCrewPortfolio with input parameter variables (npcManagerRef of type generatedFirstName, npcManagerRef of type generatedLastName, npcManagerRef of type chosenHobby) from UIManager class
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GamemodeManager → RejectCrewMember()

- Inputs
 - npcManagerRef
 - uiManagerRef
- Outputs
- Description
 - Call ChooseNewCrewMember() from NPCManager class
 - Call SetCrewPortfolio with input parameter variables (npcManagerRef of type generatedFirstName, npcManagerRef of type generatedLastName, npcManagerRef of type chosenHobby) from UIManager class

GamemodeManager → Start()

- Inputs
 - npcManagerRef
 - uiManagerRef
- Outputs
- Description
 - Call GetAllReferences()
 - Call MarkovFirstNameGenerator() from NPCManager class
 - Call MarkovLastNameGenerator() from NPCManager class
 - Call ChooseHobby() from NPCManager class
 - Call SetCrewPortfolio with input parameter variables (npcManagerRef of type generatedFirstName, npcManagerRef of type generatedLastName, npcManagerRef of type chosenHobby)

GamemodeManager → Update()

- Inputs
 - activeCrewMembers
 - isGameOver
 - uiManagerRef
 - portfolioRef
 - crewMembers
 - winObject
- Outputs
- Description
 - If activeCrewMembers has 10 members in it & the isGameOver bool is false
 - Print "You Win" to the log
 - isGameOver is set to true
 - UIManager of type portfolioRef is set to inactive
 - For each loop which loops through each member in UIManager of type crewMembers list
 - Set each member in crewMembers list to inactive
 - UIManager of type winObject is set to inactive

UI Manager Script:

UIManager → AddReferences()

- Input
 - profileImage
 - firstName
 - lastName
 - Hobby
 - winObject
 - profilePicRef
 - firstNameTxtResultRef
 - lastNameTxtResultRef
 - hobbyTxtResultRef
- Output
 - profileImage
 - firstName
 - lastName
 - Hobby
 - winObject
- Description
 - profileImage is set to component of type image from profilePicRef
 - firstName is set to component of type TextMeshProUGUI from firstNameTxtResultRef
 - lastName is set to component of type TextMeshProUGUI from lastNameTxtResultRef
 - Hobby is set to component of type TextMeshProUGUI from hobbyTxtResultRef
 - winObject is set to gameObject called "WinTxt"

UIManager → AddToCrewImageDictionary()

- Input
 - crewCharacterImage
 - crewImages
 - profileCharacterImage
- Output
 - crewImages
- Description
 - For loop which loops through as many times as crewCharacterImage length value
 - Adds profileCharacterImage, crewCharacterImage to crewImages dictionary

UIManager → SetCrewPortfolioImage()

- Input
 - profileImage
 - profileCharacterImage
- Output
 - profileCharacterImage
- Description
 - profileImage of type sprite is set to profileCharacterImage at index 0

UIManager → SetCrewPortfolio(string firstNameInput, string lastNameInput, string hobbyInput)

- Input
 - firstNameInput
 - lastNameInput
 - hobbyInput
 - firstName
 - lastName
 - hobby
- Output
 - firstName
 - lastName
 - hobby
- Description
 - Call SetCrewPortfolioImage()
 - firstName of type text is set to firstNameInput value
 - lastName of type text is set to lastNameInput value
 - Hobby of type text is set to hobbyInput value

UIManager → AddInfoToCrewBoard(string firstName, string lastName, string hobby)

- Input
 - firstName
 - lastName
 - Hobby
 - crewMembers
 - profilePic
 - firstNameRef
 - lastNameRef
 - hobbyRef
 - firstNameTxt
 - lastNameTxt
 - hobbyTxt
- Output
 - profilePic
 - firstNameRef
 - lastNameRef
 - hobbyRef
 - firstNameTxt
 - lastNameTxt
 - hobbyTxt
- Description
 - For each loop which loops through each member if crewMembers
 - Local profilePic of type Image is set to component of member of type image
 - Local firstNameRef of type GameObject is set to gameObject by name "FirstName"
 - Local lastNameRef of type GameObject is set to gameObject by name "LastName"
 - Local hobbyRef of type GameObject is set to gameObject by name "Hobby"
 - firstNameTxt of type TextMeshProUGUI is set to component of type TextMeshProUGUI from firstNameRef

- lastNameTxt of type TextMeshProUGUI is set to component of type TextMeshProUGUI from lastNameRef
- hobbyTxt of type TextMeshProUGUI is set to component of type TextMeshProUGUI from hobbyRef
- If firstNameTxt of type text is equal to string "First Name"
 - profilePic of type sprite is set to crewCharacterImage at index 0
 - firstNameTxt of type text is set to firstName value
 - lastNameTxt of type text is set to lastName value
 - hobbyTxt of type text is set to hobby value
 - Break out of loop

UIManager → RemoveInfoFromCrewBoard(string hobby)

- Input
 - Hobby
 - crewMembers
 - profilePic
 - firstNameRef
 - lastNameRef
 - hobbyRef
 - firstNameTxt
 - lastNameTxt
 - hobbyTxt
- Output
 - profilePic
 - firstNameRef
 - lastNameRef
 - hobbyRef
 - firstNameTxt
 - lastNameTxt
 - hobbyTxt
 - profilePic
 - firstNameTxt
 - lastNameTxt
 - hobbyTxt
- Description
 - For each loop which loops through each member if crewMembers
 - Local profilePic of type Image is set to component of member of type image
 - Local firstNameRef of type GameObject is set to gameObject by name "FirstName"
 - Local lastNameRef of type GameObject is set to gameObject by name "LastName"
 - Local hobbyRef of type GameObject is set to gameObject by name "Hobby"
 - firstNameTxt of type TextMeshProUGUI is set to component of type TextMeshProUGUI from firstNameRef
 - lastNameTxt of type TextMeshProUGUI is set to component of type TextMeshProUGUI from lastNameRef
 - hobbyTxt of type TextMeshProUGUI is set to component of type TextMeshProUGUI from hobbyRef
 - If hobbyTxt of type text is equal to hobby string value

- profilePic of type sprite is set to null
- firstNameTxt of type text is set to "First Name" string value
- lastNameTxt of type text is set to "Last Name" string value
- hobbyTxt of type text is set to "Hobby" string value

UIManager → Start()

- Input
 - winObject
- Output
 - winObject
- Description
 - Call AddToCrewImageDictionary()
 - Call AddReferences()
 - Print winObject of type name string value to log
 - winObject is set to inactive

NPC Manager Script:

NPCManager → AddCharToFirstNameList()

- Input
 - firstNameStartLetterList
- Output
 - firstNameStartLetterList
- Description
 - firstNameStartLetterList is cleared
 - firstNameStartLetterList is set to a new list of char variables

NPCManager → AddCharToLastNameList()

- Input
 - lastNameStartLetterList
- Output
 - lastNameStartLetterList
- Description
 - lastNameStartLetterList is cleared
 - lastNameStartLetterList is set to a new list of char variables

NPCManager → AddToHumanHobby()

- Input
 - humanHobbies
- Output
 - humanHobbies
- Description
 - humanHobbies gets 4 string variables added to the list

NPCManager → AddToAlienHobby()

- Input
 - alienHobbies
- Output
 - alienHobbies
- Description
 - alienHobbies gets 4 string variables added to the list

NPCManager → AddToFirstNameDictionary()

- Input
 - firstNameDictionary
- Output
 - firstNameDictionary
- Description
 - firstNameDictionary gets a list of letters added to it with each letter having a value assigned to it in the form of a tuple list with a string & float variable

NPCManager → AddToLastNameDictionary()

- Input
 - lastNameDictionary

- Output
 - lastNameDictionary
- Description
 - lastNameDictionary gets a list of letters added to it with each letter having a value assigned to it in the form of a tuple list with a string & float variable

NPCManager → MarkovFirstNameGenerator()

- Input
 - generatedFirstName
 - currentLetter
 - firstNameStartLetterList
 - firstNameMinLength
 - firstNameMaxLength
 - firstNameLength
- Output
 - generatedFirstName
 - currentLetter
 - firstNameMinLength
 - firstNameMaxLength
 - firstNameLength
- Description
 - generatedFirstName is set to empty
 - currentLetter is set to empty
 - currentLetter is set to a random char from firstNameStartLetterList
 - currentLetter is added to generatedFirstName
 - firstNameMinLength is set to 4
 - firstNameMaxLength is set to 7
 - firstNameLength is set to a random int between firstNameMinLength & firstNameMaxLength
 - For loop which loops through LoopFirstNameDictionary() as many times as firstNameLength value
 - generatedFirstName string gets first char converted to a capital letter

NPCManager → MarkovLastNameGenerator()

- Input
 - generatedLastName
 - currentLetter
 - lastNameStartLetterList
 - lastNameMinLength
 - lastNameMaxLength
 - lastNameLength
- Output
 - generatedLastName
 - currentLetter
 - lastNameMinLength
 - lastNameMaxLength
 - lastNameLength
- Description

- generatedLastName is set to empty
- currentLetter is set to empty
- currentLetter is set to a random char from lastNameStartLetterList
- currentLetter is added to generatedlastName
- lastNameMinLength is set to 4
- lastNameMaxLength is set to 8
- lastNameLength is set to a random int between lastNameMinLength & lastNameMaxLength
- For loop which loops through LoopLastNameDictionary() as many times as lastNameLength value
- generatedLastName string gets first char converted to a capital letter

NPCManager → LoopFirstNameDictionary()

- Input
 - firstNameDictionary
 - currentLetter
 - Value
 - randomValue
 - generatedFirstName
 - decider
- Output
 - Value
 - randomValue
 - generatedFirstName
 - Decider
 - currentLetter
- Description
 - If the currentLetter value is found in the firstNameDictionary as a key
 - Local value (list (char, float)) variable is set to firstNameDictionary value at key value equal to currentLetter value
 - randomValue is set to a random float value between 0.0f & 1.0f
 - If value is not null
 - If value of type probability at index 0 is equal to 1.0f
 - Value of type letter at index 0 is added to generatedFirstName
 - Else if value of type probability at index 0 is equal to 0.5f
 - Local decider is set to random int value between 0 or 1
 - If decider is equal to 0
 - Value of type letter at index 0 is added to generatedFirstName
 - Else
 - Value of type letter at index 1 is added to generatedFirstName
 - Else if value of type probability is greater than randomValue
 - Value of type letter at index 0 is added to generatedFirstName
 - Else
 - Value of type letter at index 1 is added to generatedFirstName
 - currentLetter is set to generatedFirstName at last char index

NPCManager → LoopLastNameDictionary()

- Input
 - lastNameDictionary
 - currentLetter
 - Value
 - randomValue
 - generatedLastName
 - decider
- Output
 - Value
 - randomValue
 - generatedLastName
 - Decider
 - currentLetter
- Description
 - If the currentLetter value is found in the lastNameDictionary as a key
 - Local value (list (char, float)) variable is set to lastNameDictionary value at key value equal to currentLetter value
 - randomValue is set to a random float value between 0.0f & 1.0f
 - If value is not null
 - If value of type probability at index 0 is equal to 1.0f
 - Value of type letter at index 0 is added to generatedLastName
 - Else if value of type probability at index 0 is equal to 0.5f
 - Local decider is set to random int value between 0 or 1
 - If decider is equal to 0
 - Value of type letter at index 0 is added to generatedLastName
 - Else
 - Value of type letter at index 1 is added to generatedLastName
 - Else if value of type probability is greater than randomValue
 - Value of type letter at index 0 is added to generatedLastName
 - Else
 - Value of type letter at index 1 is added to generatedLastName
 - currentLetter is set to generatedLastName at last char index

NPCManager → SetupCrewMember()

- Description
 - Call AddCharToFirstNameList()
 - Call AddToFirstNameDictionary()
 - Call AddCharToLastNameList()
 - Call AddToLastNameDictionary()
 - Call AddToHumanHobby()
 - Call AddToAlienHobby()

NPCManager → ChooseHobby()

- Input
 - chosenHobby

- isAlien
- alienHobbies
- humanHobbies
- Output
 - chosenHobby
 - isAlien
- Description
 - chosenHobby is set to empty
 - Local int isAlien is set to random int between 0 or 1
 - If isAlien int is 0
 - chosenHobby is set to random hobby from alienHobbies list
 - Else
 - chosenHobby is set to random hobby from humanHobbies list

NPCManager → ChooseNewCrewMember()

- Description
 - Call MarkovFirstNameGenerator();
 - Call MarkovLastNameGenerator();
 - Call ChooseHobby()

NPCManager → Start()

- Description
 - Call SetupCrewMember()