Pseudocode for Birthday.java

1. Make Birthday extend application since it’s written in JavaFX
2. Create start method.
3. Make non-constant variables:
   * welcomeMessage of type Alert for writing the welcome message
   * extraAlert of type Alert for anything that uses yes or no.
   * input of type TextInputDialog for receiving input
   * childName of type String for holding child’s name
   * toyChoice of type String to get a toy choice.
   * total of type double to get the total of the order.
   * Childage of type int to store the child’s age.
   * goAgain or type boolean for the age check
   * addAnotherToy of type boolean for the check if they want to add another toy
   * toy of type Toy for using the Toy class.
4. Make the welcome message:
   * Set the title to Welcome
   * Set the content to “Welcome to the Toy Company”
5. Show the welcome message.
6. Make a do while() loop for checking if the person wants to add another toy
   * Make another do while() loop for checking if the age is okay and they want to restart if it’s not.
     + Set title of input to “Name?”
     + Set content of input to “What is the name of the child?”
     + Create new object Optional that holds Strings and set it to the answer of the input.
     + Set childName to answer if it exists
     + Make input to a new TextInputDialog to reset.
     + Set the title of input to “Age?”
     + Set the content of input to “What is the age of the child?”
     + Set optional as the new input from input.
     + Set childAge to the answer if it exists.
     + Set input to another TextInputDialog to reset.
     + Set the title of input to “Select toy”
     + Set the content of input to “Select toy: Plushie, blocks, books”
     + Set the optional to the new input from input.
     + Set toyChoice to the the answer of input
     + Initialize the toy object with and give the toyChoice as the first argument and the second argument as childAge.
     + Check if the age is appropriate of the toy
       - If it’s not okay, create a new confirmAlert of type Alert.
       - Set the title of confirmAlert to “Please confirm!”
       - Set the content to “The toy is not age appropriate, do you want to continue?”
       - Create two variables yesOption, noOption of type ButtonType to get the options from the confirmAlert.
       - Add yesOption, noOption to confirmAlert’s button types.
       - If the answer is yes, then make goAgain false. Else, make it true.
     + If goAgain is true, go again and get the name, age, and toy choice. If not, continue.
   * Initialize extraAlert as a new Alert with the Confirmation alert type.
   * Set the title of extraAlert to “Balloon?”
   * Set the content of extraAlert to “Do you want to add a balloon?”
   * Create yesOption, noOption as ButtonType for the yes and no buttons.
   * Add the buttons to the extraAlert.
   * Create an Optional variable to get the answer of the extraAlert
   * If the answer is yes, add a balloon price to the price
   * Set the title of extraAlert to “Card”
   * Set the content to “Do you want to add a card with the gift?”
   * Set the Optional to the answer of extraAlert.
   * If the answer is yes, add the price of the card to the price.
   * Output “The gift for childName childAge is toyChoice toyCost”
   * Add the toy cost to the total;
   * Set the title for extraAlert to “Another toy?”
   * Set the content for extraAlert to “Do you want to add another toy?”
   * If yes, set the following variables:
     + addAnotherToy to true
     + input to a new TextInputDialog object
     + toy to null
     + childName to “”
     + toyChoice to “”
   * Go through the entire loop again if the user selected yes for adding another toy.
7. Create a new Random Object.
8. Make the random Object give a random 5 digit number
9. Show the user the total price of the order with total
10. Show programmer name

Test cases for Birthday.java:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case #** | **Input** | **Expected Output** | **Actual Output** | **Did the test pass?** |
| 1 | Name: Maddison  Age: 2  Choice: plushie  Card?: No  Balloon?: No  Go again?: No | The gift for Maddison 2 is plushie 25.00  The total cost of your order is 25.00 Order number is RANDOMNUMBER | The gift for Maddison 2 is plushie 25.00  The total cost of your order is 25.00 Order number is 10137 | Y |
| 2 | Name: Natasha  Age: 7  Choice: book  Card?: No  Balloon?: No  Go again?: Yes  Name: Shawn  Age: 4  Choice: blocks  Card?: Yes  Balloon?: Yes | The gift for Natasha 7 is book 15.00  The gift for Shawn 4 is blocks 28.95  The total cost of your order is 43.95 Order number is RANDOMNUMBER | The gift for Natasha 7 is book 15.00  The gift for Shawn 4 is blocks 28.95  The total cost of your order is 43.95 Order number is 11425 | Y |
|  |  |  |  |  |
| 3 | Name: Janis  Age: 2  Choice: blocks  Card?: Yes  Balloon?: Yes  Go again?: No | The gift for Janis 2 is blocks 28.95  The total cost of your order is 28.95 Order number is RANDOMNUMBER | The gift for Janis 2 is blocks 28.95  The total cost of your order is 28.95 Order number is 10177 | Y |

UML Diagram:

A screenshot of a cell phone

Description automatically generated

Test Pictures:

A screenshot of a cell phone

Description automatically generatedA screenshot of a cell phone

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