Project 1 – Working with Decision Structures and Loops: Objectives

- Declare variables with descriptive names
- Construct `boolean` expressions to evaluate a given condition using the `if` keyword
- Compare user input to expected values
- Use a boolean flag
- Construct `if` and `if-elif-else` statements to perform conditional tasks
- Use logical operators to test ranges of values
- Print and format output
- Use a loop to repeat a process

Introduction

You are coding an application for a cruise line, that prints a customized activity list for a passenger, based on their age. For example, children and teenagers are allowed access to the Camp and adults over the age of 21 are permitted to visit the bars and casinos on board.

Your program will prompt the user to enter the following:

- Full name
- Age (as a whole number)

Based on the age entered by the user, determine the "passenger category" by finding the appropriate age range in which the age falls.

1. Child (0-12)
2. Teenager (13-19)
3. Young Adult (18-20)
4. Adult (21 and over)
5. Senior (65 and over)

Note that some passengers will fall into more than 1 category! Passengers who are 18 or 19 are both teenagers and young adults. Seniors, 65 and over, are also adults.

Each age category has specific activities allowed:

Age Category	Activities
Child (0-12)	Kids Club, Splash Zone
Teenager (13-19)	Teen club, Water slides
Young Adult (18-20)	Dance club, Water slides, Comedy Club, Adult Pool
Adult (21 and up)	All Young Adult Activities, plus access to bars and the casino
Senior (65 and up)	Same activities as Adults, plus a purchase discount of 15% on board

Once you have determined the age range a passenger falls into, provide a list of the activities (one per line in the printout) that they are entitled to enjoy based on the Activities listed above.

For all passengers 21 and over, add a notice about drinking responsibly while on board.

Finally, ask the user if they would like to print another activity list for a new passenger.

- If they reply "y", repeat the process again.
- All other replies should display a message telling the passenger to enjoy their cruise and the program should end.

Here is some sample output:

```
Enter passenger name:  Happy Cruiser
Enter passenger age:  27
        All Adults can enjoy the following activities:
        Dance Club
        Comedy Club
        Adult Pool
        All bars and casinos

As a reminder, please drink responsibly!

Would you like to print another activity list for a new passenger?  y

Enter passenger name:  Little Cruiser
Enter passenger age:  9
All children ages 12 and under can enjoy the following activities:
        Kid's Club
        Splash Zone

Would you like to print another activity list for a new passenger?  y
```

Enter passenger name: Teen Cruiser
Enter passenger age: 15
All teenagers ages 13-19 can enjoy the following activities:
    Teen club
    Water Slides

Would you like to print another activity list for a new passenger? y

Enter passenger name: Young Adult Cruiser
Enter passenger age: 19
All teenagers ages 13-19 can enjoy the following activities:
    Teen club
    Water Slides
All 18 and 19 year old passengers may also participate in:
    Dance Club
    Comedy Club
    Adult Pool

Would you like to print another activity list for a new passenger? y

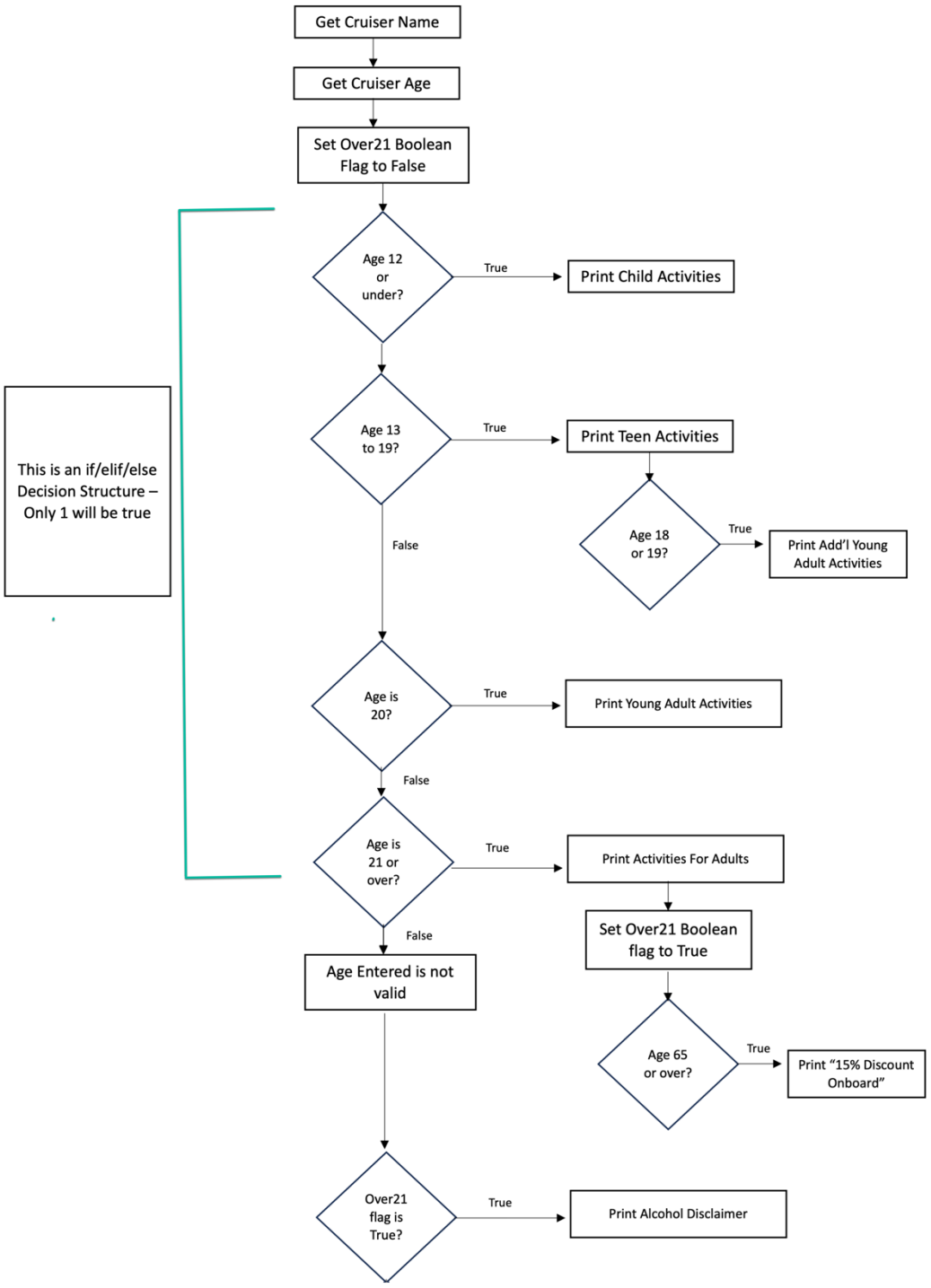
Enter passenger name: Seasoned Cruiser
Enter passenger age: 70
    All Adults can enjoy the following activities:
    Dance Club
    Comedy Club
    Adult Pool
    All bars and casinos
Senior cruisers are entitled to a 15% purchase discount on-board

As a reminder, please drink responsibly!

Would you like to print another activity list for a new passenger? n

Enjoy your cruise!

Use the following flowchart to help you write your code:



REQUIREMENTS:

- Loops must be condition-based
- When testing the age ranges YOU MUST USE THE LOGICAL OPERATORS and specifically test two separate expressions:

```
if age >= 13 and age <= 19:
    print("Teenager")
```

Please see examples in the textbook by searching for "Checking Numeric Ranges with Logical Operators". No other formats accepted.

- Use the Over21 Boolean flag to identify that the age is indeed over 21 without having to run the if statement a second time. NOTE: If you set the flag to False at the beginning of the program (see the flowchart), you only need to flip it to true when the age is 21 or over.

  Please see examples in the textbook in section 3.6 on Boolean variables.

- Make sure to match the output provided.

- Your code **must contain the following comments at the top**:
  - Your full name
  - The date
  - A brief description of your program
  - The Academic Integrity Acknowledgment from the syllabus

- Your code must contain comments THROUGHOUT, identifying what each section of code is doing (this does not mean every line).

SUGGESTIONS:

- DO NOT TRY TO CODE THE ENTIRE PROGRAM AT ONCE! Start off getting the input and slowly add the `if/elif` statements.
- Once the age range tests are working, add the nested ifs that you see on the flowchart.
- Test thoroughly! You must test for each possible age range to make sure your output and logic are correct.

Grading Rubric:

Points	Criteria
50	• Code executes without errors, is neat and easy to read. • Code follows the format in the recorded lectures and textbook source code examples. • Variables are declared with proper data types and descriptive names. • The output matches the specifications. • All comments are included: Your name, CMP131, program description, and academic integrity acknowledgement.
40	• Code executes, but presenation is sloppy and difficult to read • The output is close to the specifications, but not exact. • All comments are included: Your name, CMP131, program description, and academic integrity acknowledgement.
30	• Code is sloppy • Output does not match specifications • Some comments included, but not many
25	• Code is sloppy and difficult to read • No comments and/or missing screenshots of program running. • Runtime errors prevent the code from running successfully
0	• Nothing is submitted OR • The submission does not follow the lecture/textbook style as required. • There is a violation of the Academic Integrity policy