CS 350 Homework

1. What is the value of each of the following Boolean expressions? Assume that the value of *Age* is 10 and the value of *Limit* is 21

**a) Age < 13 True**

**b) Limit <= Age False**

**c) (Age+5) == (Limit-6) True**

**d) Age != 10 False**

**e) Limit<=18 False**

**f) Age <= Limit True**

1. Which control structure would you use to implement the rules on the table?

A = Sequence

Which control structure would you use to repeat the calculation for the 30 students?

C = Iteration

**3.** weight= "What is the weight of your suitcase? \n"

val = input(weight)

if int(val) > 50:

print ("There is a $30 charge for luggage that heavy.")

else:

print (“Thank you for your business.")

1. if (((side1 + side2) > side3) or ((side2 + side3) > side1) or ((side1 + side3) > side2)):

print (“Values held by the variables triangle sides”)

else:

print (“Not values held by the variables triangle sides”)

**5.** Output

I like to drink water

I like to drink orange juice

I like to drink tea

I like to drink coffee

I like to drink milk

**6.** def chorus(p1):

for finger in p1:

print("You put your", finger,"in,")

print("You put your", finger,"out,")

print("You put your", finger,"in,")

print("And you shake it all about,")

print("You do the hokey pokey")

print("and you turn yourself around")

print("That's what it's all about")

print("")

fingers =["right hand", "left hand", "right foot"]

chorus(fingers)

**7.** public class Main

{

public static void main(String[] args)

{

System.out.println(weekpay(4000,4));

System.out.println(weekpay(4000,42));

}

public static double weekpay(int hourlysalary,int hours)

{

if(hours <= 40)

return hourlysalary \* hours;

else

return (hourlysalary \* 40) + ((hours - 40) \* (hourlysalary \* 1.5)); //ternary operator

}

}

**8.** Output

[ 'Mercedez', 'Volvo', 'BMW', 'Lexus', 'Tesla' ]

[ 'Mercedez', 'Volvo', 'BMW', 'Lexus', 'Tesla' ]

**9.** Output

[0, 4, 16, 36, 64, 100]

**10.** Output

[3]

[3, 9]

[3, 9, 15]

[3, 9, 15, 21]

[3, 9, 15, 21, 27]

1**1.** Output

peanut butter

sugar

banana

**12.** Convert the code from question 11 to make use of list comprehension.

ingredients = ["chocolate", "peanut butter", "sugar", "banana", "strawberry", "vanilla", "honey"]

[print(flavor) for flavor in ingredients [1:4]]

**13.** movies = {

"2018, Bohemian Rhapsody": ["Rami Malek","Ben Hardy","Mike Myers","Lucy Bynton"],

"2017, Get Out": ["Daniel Kaluuya", "Allison Williams", "Catherine Keener"],

"2017 Logan": ["Hugh Jackman", "Boyd Holbrook", "Patrick Stewart"],

"2018, Black Panther": ["Chadwick Boseman", "Michael B. Jordan", "Lupita Nyong'o"],

"2016, Doctor Strange": ["Benedict Cumberbatch", "Rachel McAdams", "Ch. Ejiofor"],

"2016, La La Land": ["Emma Stone", "Ryan Gosling", "John Legend"]

}

for newmovie in movies:

if newmovie. startswith("2016"):

print(newmovie + " " + str(movies[newmovie]))

**14.** students = [{"name":"Alex", "gpa":3.2},

{"name":"Karl", "gpa": 2.85},

{"name":"Lulu", "gpa":3.6},

{"name":"Andrea", "gpa": 1.4},

{"name":"Malika", "gpa":3.3},

{"name":"Mike", "gpa": 1.7},

{"name":"Peter", "gpa": 2.4},

{"name":"Noel", "gpa":1.8},

{"name":"Mon", "gpa":1.4},

{"name":"Alice", "gpa":3.8},

{"name":"Ben", "gpa":2.9},

{"name":"Saira", "gpa":1.2}]

for student in students:

if (student["gpa"] >= 2.85):

print (student["name"])