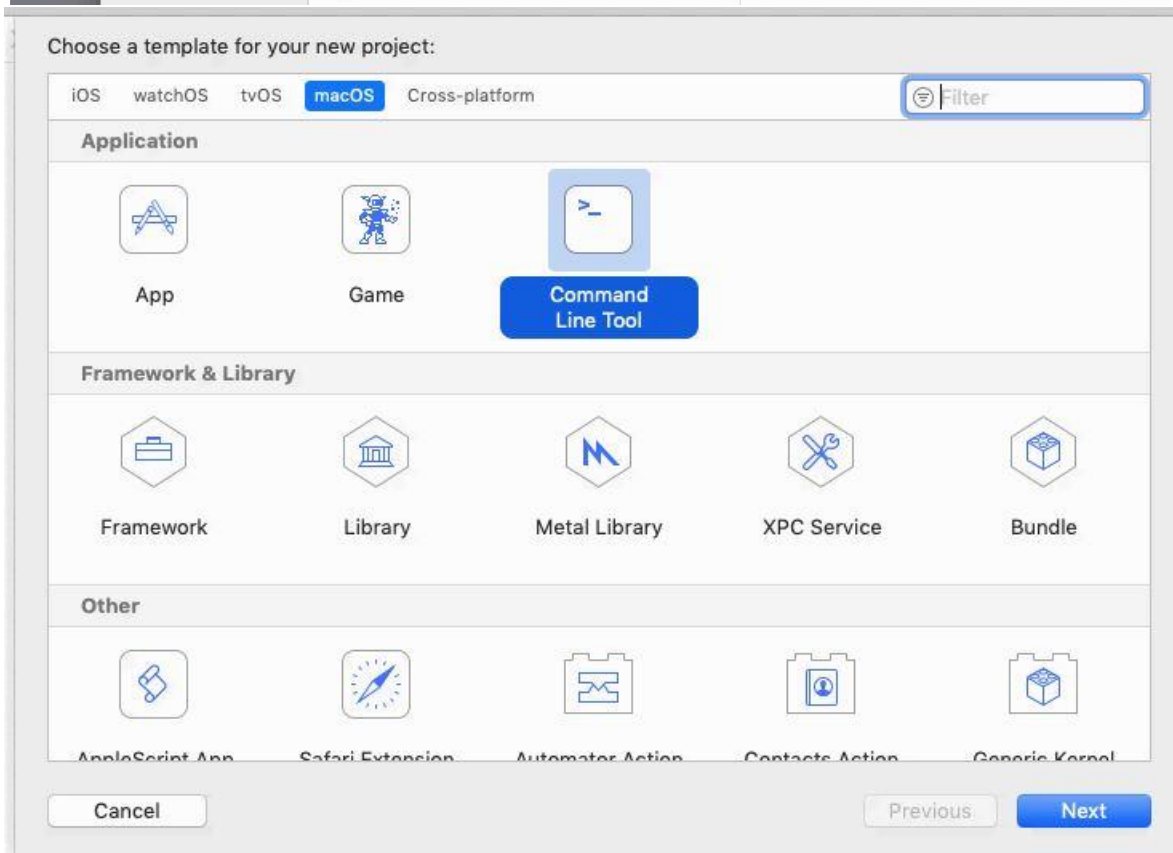
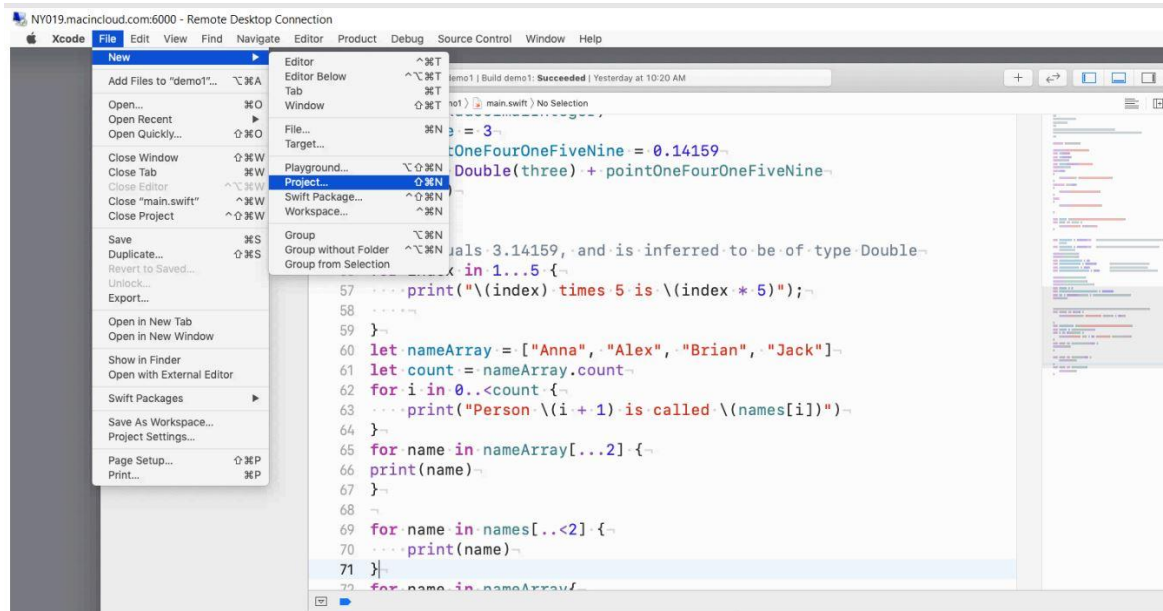


IOS ASSIGNMENT 1

1) Create a program in Xcode

- A. Make sure it is a building for macOS
- B. Make sure it is a “command line tool”

Answer:

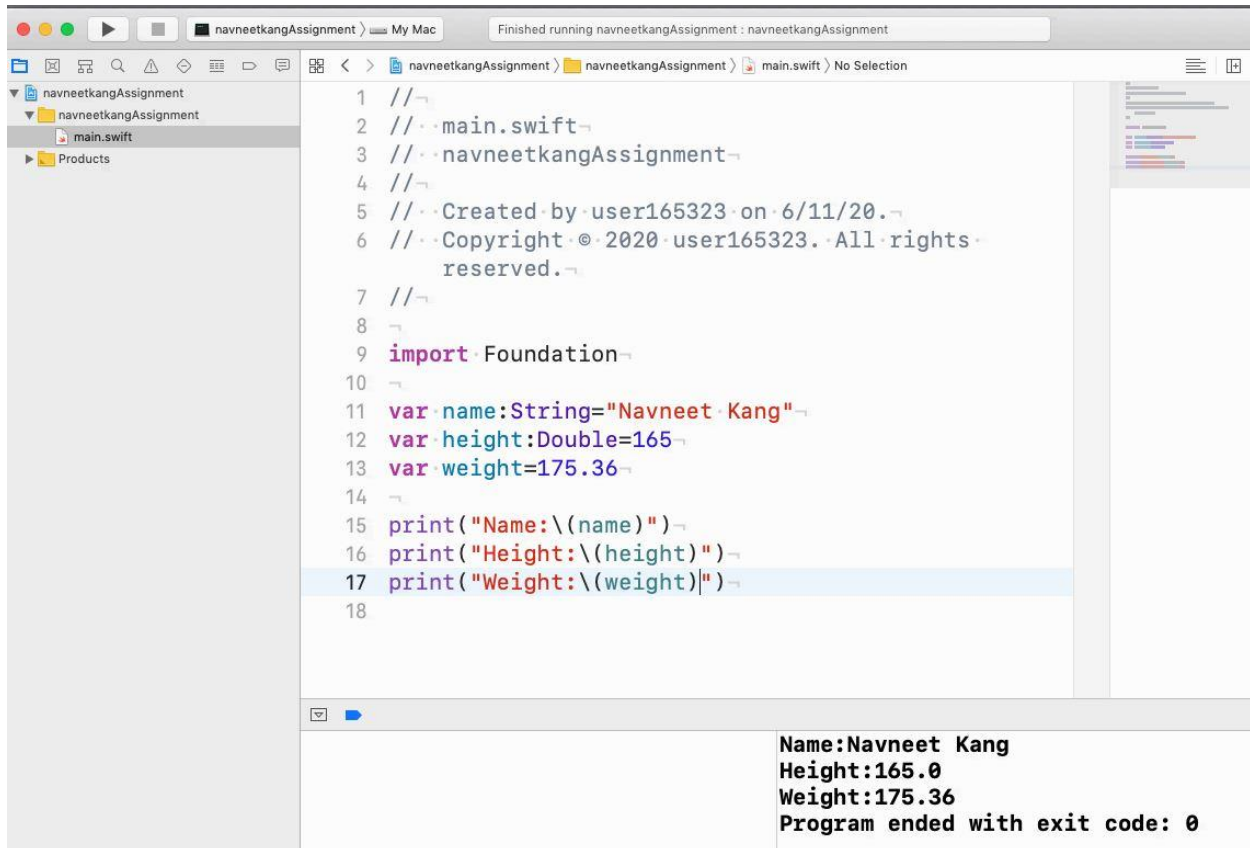


2) Create 3 variables

A. Name the variables: name, height and weight

1. Assign your height to height
2. Assign name to be your name
3. Assign 175.36 to weight

Answer:



```
1 //
2 // main.swift
3 // navneetkangAssignment
4 //
5 // Created by user165323 on 6/11/20.
6 // Copyright © 2020 user165323. All rights reserved.
7 //
8
9 import Foundation
10
11 var name:String="Navneet Kang"
12 var height:Double=165
13 var weight=175.36
14
15 print("Name:\(name)")
16 print("Height:\(height)")
17 print("Weight:\(weight)")
18
```

Name:Navneet Kang
Height:165.0
Weight:175.36
Program ended with exit code: 0

3) In the document explain what type each variable is?

Answer:

Variable **name** is of string datatype,

Variable **height** is of double datatype,

Variable **weight** is of double datatype

String Datatype: This is an ordered collection of characters. For example, "Navneet Kang"

Double Datatype– This is used to represent a 64-bit floating-point number and used when floating-point values must be very large. For example,175.36.

4) Are the above, explicitly or implicitly typed variables?

Answer: In the above program, **name** and **height** are explicitly typed variable while **weight** is implicitly typed.

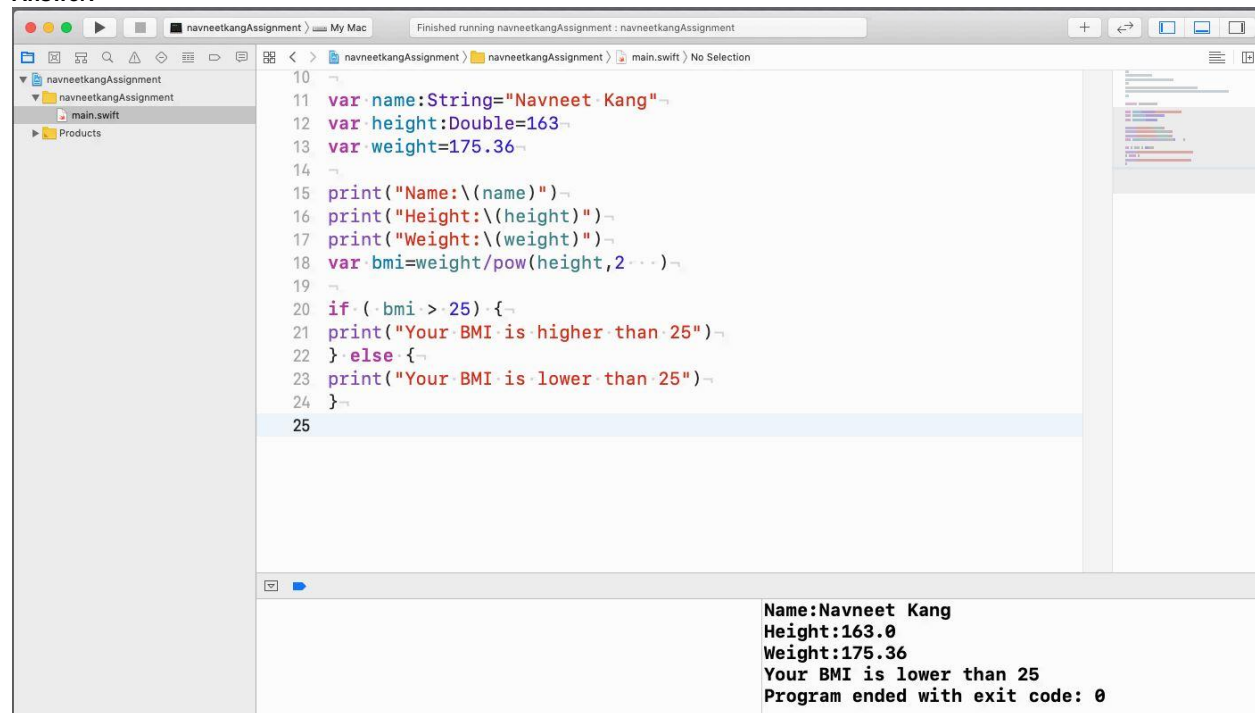
Implicit Datatype: As in swift, data type can either be declared specifically like Int, String, Float, Double, Bool, etc. So, if the declaration of variable takes place without any proper specification and swift itself determines the datatype by accessing the data then it is called implicit data type as in case of **weight**, I have not mentioned any datatype and the swift itself recognized it as "Double Datatype".

Explicit Datatype: The datatype which is given to variable specifically is called explicit datatype for e.g in case of **name**, I gave specific datatype of "**String**" and for **height**, I gave specific datatype of "**Double**".

5) Convert the following pseudocode to swift:

```
If ( weight / height^2) > 25 {  
Print: Your BMI is higher than 25  
} else {  
Print: your BMI is lower than 25  
}
```

Answer:



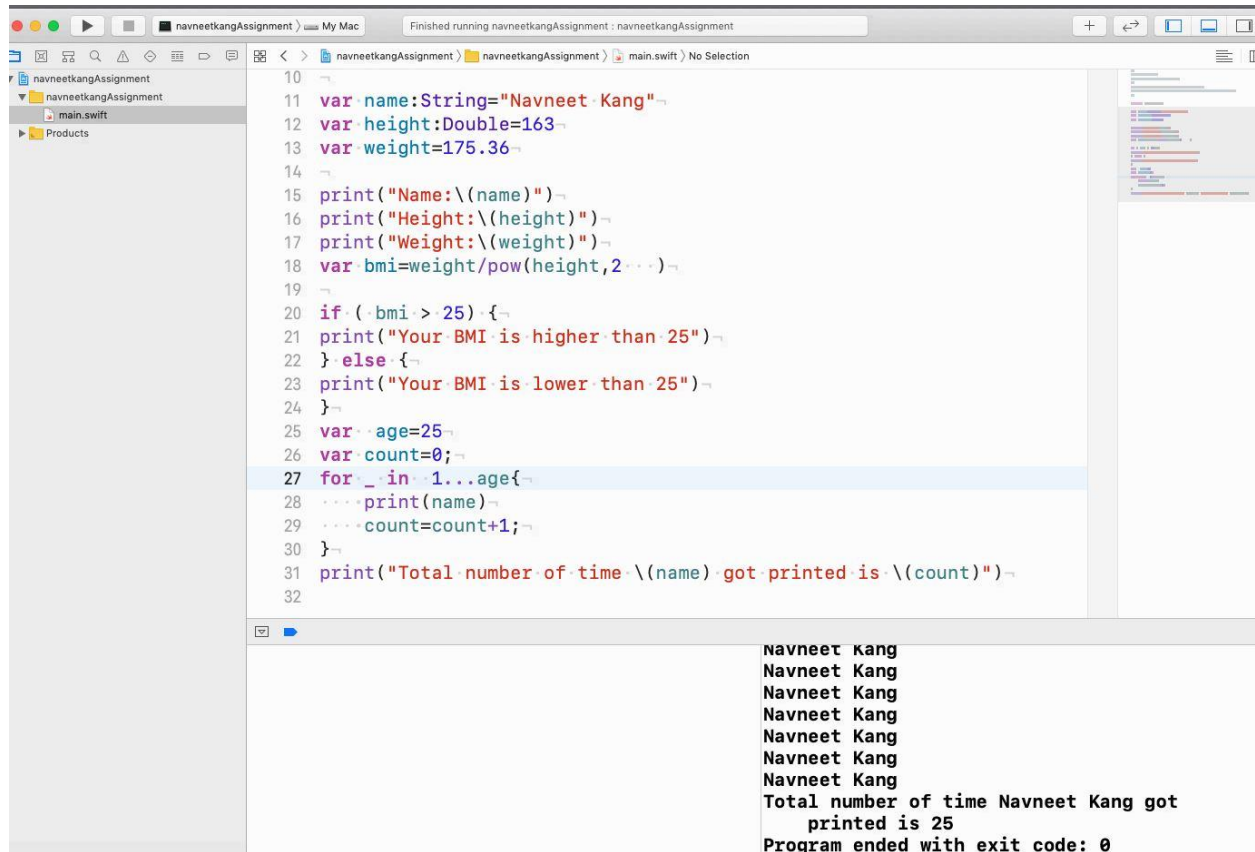
```
10  
11 var name:String="Navneet Kang"  
12 var height:Double=163  
13 var weight=175.36  
14  
15 print("Name:\(name)")  
16 print("Height:\(height)")  
17 print("Weight:\(weight)")  
18 var bmi=weight/pow(height,2)  
19  
20 if ( bmi > 25 ) {  
21 print("Your BMI is higher than 25")  
22 } else {  
23 print("Your BMI is lower than 25")  
24 }  
25
```

Output:

```
Name:Navneet Kang  
Height:163.0  
Weight:175.36  
Your BMI is lower than 25  
Program ended with exit code: 0
```

6) Afterwards create a block of code the prints your name as many time as your age
A. Ex: I and 27 so my name should be printed 27 times

Answer:



```
10
11 var name:String="Navneet·Kang"
12 var height:Double=163
13 var weight=175.36
14
15 print("Name:\(name)")
16 print("Height:\(height)")
17 print("Weight:\(weight)")
18 var bmi=weight/pow(height,2)
19
20 if (bmi > 25) {
21     print("Your BMI is higher than 25")
22 } else {
23     print("Your BMI is lower than 25")
24 }
25 var age=25
26 var count=0
27 for _ in 1...age {
28     print(name)
29     count=count+1
30 }
31 print("Total number of time \(name) got printed is \(count)")
32
```

Navneet Kang
Navneet Kang
Navneet Kang
Navneet Kang
Navneet Kang
Navneet Kang
Navneet Kang
Total number of time Navneet Kang got
printed is 25
Program ended with exit code: 0

7) Explain what type of loop you used and how it works. Explain why you chose this loop instead of the others.

Answer:

I used “for Loop” because it has a built-in “index” which makes going through data fast and easy.

“while Loop” is probably one of the most basic and known loops. A while loop performs a set of statements until a condition becomes false.

“repeat ...while Loop” is similar to the “while loop”, this will execute the codes that one has set and will exit the loop once the condition is not fulfilled. However, the main difference is that the while loop starts with a condition check first before it does the statements. Thus, the codes you set might not be executed at all if the condition has already been fulfilled.

```
25 /*-----FOR LOOP-----*/
26 var age=26
27 var count=0
28 for _ in 1...age {
29     print(name)
30     count=count+1
31 }
32 print("Using For Loop: Total number of time \(name) got printed is \(count)")
33 /*-----While Loop-----*/
34 count=0
35 while count<age {
36     print(name)
37     count=count+1
38 }
39 print("Using While Loop: Total number of time \(name) got printed is \(count)")
40 /*-----Repeat While Loop-----*/
41 count=0
42 repeat {
43     print(name)
44     count=count+1
45 } while count<age
46
47 print("Using Do While Loop: Total number of time \(name) got printed is \(count)")
48
```

8)REAL BMI FOR A CANDIDATE

```
48  
49 print("\nReal BMI :::(weight in kg)/(height(in m)*height(in m))")  
50 print("\nReal BMI :::(weight in lbs)/2.20462 / (height(in m)*height(in m))")  
51  
52 print("\nInformation for \ \(name)")  
53 weight=121.254  
54 bmi=(weight/pow(height/100,2))/2.20462  
55 print("BMI:\(bmi)")  
56  
57 if ( bmi > 25 ) {  
58 print("Your BMI is higher than 25")  
59 } else {  
60 print("Your BMI is lower than 25")  
61 }  
62
```

Navneet Kang
Navneet Kang
Navneet Kang
Using Do While Loop: Total number of time Navneet Kang
got printed is 26

Real BMI :::(weight in kg)/(height(in m)*height(in m))

Real BMI :::(weight in lbs)/2.20462 / (height(in
m)*height(in m))

Information for Navneet Kang
BMI:20.700799669053808
Your BMI is lower than 25
Program ended with exit code: 0

For Code, Refer to <https://github.com/KangNavneet/iosDevelopment/blob/master/assignment1>