

## Script:

```
ycao25sharon@Wed Dec 08]> ls
Client_file LAB Reference.txt SampleLoss.txt SampleMaintain.txt
SampleMass.txt active project testFiles
ycao25sharon@Wed Dec 08]> _
```

```
1 #####
2 #Shabang
3 #####
4 #!/bin/bash
5
6 #####
7 #Basic information -- File created
8 #####
9
10 #Client name intake
11 echo "Welcome! What is your name?"
12 echo "First name: "
13 read fname
14 echo "Last name: "
15 read lname
16 echo
17 echo "Nice to meeting you, $fname $lname!" #print on screen
18
19 #create client file with client name
20 touch ./Client_file/"$fname"_"$lname".txt
21 #greeting in txt file
22 echo "Hi, $fname $lname!" > ./Client_file/"$fname"_"$lname".txt #save to txt file
23 echo "This is your customized information sheet." >> ./Client_file/"$fname"_"$lname".txt
24 echo >>./Client_file/"$fname"_"$lname".txt
25
26 #gender
27 echo "Please enter your gender[M/F]: ?"
28 read gender
29
30 #check input
31 while [ "$gender" != "M" ] && [ "$gender" != "F" ]
32 do
33     echo "Re-enter ('M' for Male, 'F' for Female): "
34     read gender
35 done
36
37 #####Print in file#####
38 echo "BASIC INFORMATION" >> ./Client_file/"$fname"_"$lname".txt
39 echo "-----" >> ./Client_file/"$fname"_"$lname".txt
40 echo "Gender: $gender" >> ./Client_file/"$fname"_"$lname".txt
41
42 #####
43 #Age
44 #####
45 #prompt user input
46 echo -n "Enter the birthdate (mm-dd-yyyy): "
47 read bdate
48
49 bmonth=${bdate:0:2}
50 bday=${bdate:3:2}
51 byear=${bdate:6:4}
52
53 cdate=`date +%m-%d-%Y`
54
55 cmonth=${cdate:0:2}
56 cday=${cdate:3:2}
57 cyear=${cdate:6:4}
58
59 if [ "$cmonth" -lt "$bmonth" ] || [ "$cmonth" -eq "$bmonth" ] && [ "$cday" -lt "$bday" ]
60 then
61     let age=cyear-byear-1
62 else
63     let age=cyear-byear
64 fi
65
66 #####Print in file#####
67 echo "Age = $age" >> ./Client_file/"$fname"_"$lname".txt
68
69
```

```

70 #####
71 #Height
72 #####
73 #Client height intake
74 echo
75 echo "You are in Height Section now!"
76 height=0.00
77 echo -n "Please enter unit choice(1 -> cm, 2 -> feet): "
78 read choiceH
79
80 #check choice validation
81 #check if number in range
82 while [ $choiceH -ge 3 ]
83 do
84     echo "Out of range. Enter again(1 -> cm, 2 -> feet): "
85     read choiceH
86 done
87
88 #user input for height in selected unit
89 if [ $choiceH -eq 1 ]; then
90     echo -n "Enter your height in cm: "
91     read heightC
92     #echo "Your height is $heightC cm."
93 else
94     echo -n "Enter your height in feet: "
95     read heightF
96     #echo "Your height is $heightF feet."
97 fi
98
99
100 #unit conversion: both data in cm and inches needed for futhur calculation
101 c0=12
102 c=0.393701
103 c1=30.48
104 if [ $choiceH -eq 1 ]; then
105     heightI=$(echo "scale=2;$heightC*$c" | bc)
106 else
107     heightI=$(echo "scale=2;$heightF*$c0" | bc)
108     heightC=$(echo "scale=2;$heightF*$c1" | bc)
109 fi
110 #echo "Heigh: $heightC cm / $heightI inches / $heightF feet"
111
112
113 #height information output
114 echo "Height entered is $heightC cm. " #on screen
115 #####Print in file#####
116 echo "Height: $heightC cm ($heightF feet)" >> ./Client_file/"$fname"_"$lname".txt #in file
117
118 #####
119 #Weight
120 #####
121 #Client weight intake
122 weight=0.00
123 echo #empty line
124 echo "You are going to Weight Section!"
125 echo -n "What is your input unit(1 for lb, 2 for kg)? "
126 #Read integer form input
127 read choiceW
128
129 #check if number in range
130 while [ $choiceW -ge 3 ]
131 do
132     echo "Out of range. Enter again(1 for lb, 2 for kg): "
133     read choiceW
134 done
135
136 #user input in selected unit
137 if [ $choiceW -eq 1 ]; then
138     echo -n "Enter your weight in lb: "
139     read weightL
140     #echo "Your entered $weightL lb."
141 else
142     echo -n "Enter your weight in kg: "
143     read weightK
144     #echo "Your entered $weightK kg."
145 fi
146

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147
148 #unit convert from lb to kg and kg to lb
149 c2=2.2046
150 if [ $choiceW -eq 1 ]; then
151     weightK=$(echo "scale=2;$weightL/$c2" | bc)
152     #echo "Weight is $weightK kg."
153 else
154     weightL=$(echo "scale=2;$weightK*$c2" | bc)
155     #echo "Weight is $weightL lb."
156 fi
157
158
159 #print weight in kg
160 echo "Weight: $weightK kg ($weightL lbs)" >> ./Client_file/"$fname_" "$lname".txt #in file
161 echo "Your weight in Kilogram is $weightK kg." #on screen
162
163 #calculate BMI and display to client
164 c3=10000
165 BMI=$(echo "scale=2; $weightK*$c3/$heightC/$heightC" | bc)
166 echo #empty line
167 echo "Your BMI is $BMI." #on screen
168
169 echo "BMI: $BMI" >> ./Client_file/"$fname_" "$lname".txt #in file
170
171 #####
172 #Calories
173 #####
174 #####
175 #BMR
176 #####
177 #info for BMR
178 echo
179 echo "Calories Section!"
180 echo "BMR Information: "
181 echo "The Basal Metabolic Rate (BMR) is the amount of energy (calories) your body needs while resting." #on screen
182
183 #Determine constant regarding to gender
184 if [ "$gender" == "F" ]; then
185     x1=655
186     x2=4.3
187     x3=4.7
188     x4=4.7
189     #echo "$x1 $x2 $x3 $x4"
190
191 else
192     x1=66
193     x2=6.3
194     x3=12.9
195     x4=6.8
196     #echo "$x1 $x2 $x3 $x4"
197 fi
198
199 #BMR calculation
200 BMR=$(echo "scale=2; $x1+$x2*$weightL+$x3*$heightI-$x4*$age" | bc)
201 echo "Your BMR is $BMR"
202
203 #####Print in file#####
204 echo >>./Client_file/"$fname_" "$lname".txt
205 echo "CARLORIES SECTION" >>./Client_file/"$fname_" "$lname".txt
206 echo "-----" >> ./Client_file/"$fname_" "$lname".txt
207 echo >>./Client_file/"$fname_" "$lname".txt
208 echo "BMR Information: " >>./Client_file/"$fname_" "$lname".txt
209 echo "The Basal Metabolic Rate (BMR) is the amount of energy (calories) your body needs while resting." >>./
    Client_file/"$fname_" "$lname".txt
210 echo >>./Client_file/"$fname_" "$lname".txt
211 echo "Your BMR: $BMR" >>./Client_file/"$fname_" "$lname".txt
212

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```

213 #####
214 #Exercise Level
215 #####
216 #selection sheet
217 echo
218 cat active
219
220
221 #user input
222 echo -n "Please select: "
223 read level
224
225 #check entry range
226 while [ $level -ge 6 ]
227 do
228     echo "Please reselect: "
229     read level
230 done
231
232 #Calculate daily calories need
233 if [ $level -eq 1 ]; then
234     p=1.2
235 elif [ $level -eq 2 ]; then
236     p=1.375
237 elif [ $level -eq 3 ]; then
238     p=1.55
239 elif [ $level -eq 4 ]; then
240     p=1.725
241 else
242     p=1.9
243 fi
244
245 cal=$(echo "scale=2; $BMR*$p" | bc)
246 echo "Your daily calories need is $cal calories."
247 #####Print in file#####
248 #####Print in file#####
249 cat active >> ./Client_file/"$fname"_"$lname".txt
250 echo >> ./Client_file/"$fname"_"$lname".txt
251 echo "Your choice is: $level" >> ./Client_file/"$fname"_"$lname".txt
252 echo >> ./Client_file/"$fname"_"$lname".txt
253 echo "Your daily calories need based on active level is $cal calories." >> ./Client_file/"$fname"_"$lname".txt
254
255
256 #####
257 #GOAL AND ADVICES
258 #####
259 #section header
260 echo
261 echo "GOALS AND ADVICE"
262 #####Print in file#####
263 echo >> ./Client_file/"$fname"_"$lname".txt #in file
264 echo "GOALS AND ADVICE" >> ./Client_file/"$fname"_"$lname".txt #in file
265 echo "-----" >> ./Client_file/"$fname"_"$lname".txt
266
267 #promot user to select goal
268 echo "Do you want to 1. Maintain Weight 2. Lose Weight or 3. Gain Mass:"
269 read choice
270
271 #check if choice in range
272 while [ $choice -ge 4 ]
273 do
274     echo "Enter again: "
275     read choice
276 done
277

```



```

278
279 #confirm users' choice and add to client file
280 if [ $choice -eq 1 ]; then
281     echo "Your want to maintain your current weight!"
282     echo
283     echo "TIPS: "
284     echo
285     cat SampleMaintain.txt
286     #####Print in file#####
287     echo >> ./Client_file/"$fname"_"$lname".txt #in file
288     echo "Your want to maintain your current weight!" >> ./Client_file/"$fname"_"$lname".txt
289     echo >> ./Client_file/"$fname"_"$lname".txt #in file
290     echo "TIPS: " >> ./Client_file/"$fname"_"$lname".txt #in file
291     echo >> ./Client_file/"$fname"_"$lname".txt #in file
292     cat SampleMaintain.txt >> ./Client_file/"$fname"_"$lname".txt #in file
293
294 elif [ $choice -eq 2 ]; then
295     echo "Your want to lose weight!"
296     echo
297     echo "Advice: "
298     cat SampleLoss.txt
299     #####Print in file#####
300     echo >> ./Client_file/"$fname"_"$lname".txt #in file
301     echo "Your want to lose weight!" >> ./Client_file/"$fname"_"$lname".txt
302     echo >> ./Client_file/"$fname"_"$lname".txt #in file
303     echo "ADVICE: " >> ./Client_file/"$fname"_"$lname".txt #in file
304     echo >> ./Client_file/"$fname"_"$lname".txt #in file
305     cat SampleLoss.txt >> ./Client_file/"$fname"_"$lname".txt #in file
306
307 else
308     echo "Your want to gain muscle!"
309     echo
310     echo "Sample Exercises: "
311     cat SampleMass.txt
312     #####Print in file#####
313     echo >> ./Client_file/"$fname"_"$lname".txt #in file
314     echo "Your want to gain muscle!" >> ./Client_file/"$fname"_"$lname".txt
315     echo >> ./Client_file/"$fname"_"$lname".txt #in file
316     echo "SAMPLE EXERCISES: " >> ./Client_file/"$fname"_"$lname".txt #in file
317     echo >> ./Client_file/"$fname"_"$lname".txt #in file
318     cat SampleMass.txt >> ./Client_file/"$fname"_"$lname".txt #in file
319 fi
320 #####
321 #Reference
322 #####
323 echo >> ./Client_file/"$fname"_"$lname".txt
324 echo >> ./Client_file/"$fname"_"$lname".txt
325 cat Reference.txt >> ./Client file/"$fname"_"$lname".txt

```

**On Screen User Prompt:**

```
ycao25sharon@Wed Dec 08]> bash project
Welcome! What is your name?
First name:
Sharon
Last name:
Cao

Nice to meeting you, Sharon Cao!
Please enter your gender[M/F]: ?
g
Re-enter ('M' for Male, 'F' for Female):
F
Enter the birthdate (mm-dd-yyyy): 08-05-1997

You are in Height Section now!
Please enter unit choice(1 -> cm, 2 -> feet): 3
Out of range. Enter again(1 -> cm, 2 -> feet):
2
Enter your height in feet: 5.78
Height entered is 176.17 cm.

You are going to Weight Section!
What is your input unit(1 for lb, 2 for kg)? 8
Out of range. Enter again(1 for lb, 2 for kg):
1
Enter your weight in lb: 146
Your weight in Kilogram is 66.22 kg.

Your BMI is 21.33.
```

## Calories Section!

### BMR Information:

The Basal Metabolic Rate (BMR) is the amount of energy (calories) your body needs while resting.  
Your BMR is 1495.99

What is your active level?

1. Sedentary (little or no exercise);
2. Lightly active (light exercise/sports 1-3 days/week);
3. Moderately active (moderate exercise/sports 3-5 days/week);
4. Very active (hard exercise/sports 6-7 days a week);
5. Extra active (very hard exercise/sports & physical job or 2x training).

Please select: 3

Your daily calories need is 2318.78 calories.

## GOALS AND ADVICE

Do you want to 1. Maintain Weight 2. Lose Weight or 3. Gain Mass:

3

Your want to gain muscle!

### Sample Exercises:

-----

#### MONDAY: UPPER BODY

Incline Barbell Bench Press: 3 x 8-12  
Barbell Rows: 3 x 8-12  
Military Dumbbell Press: 3 x 8-12  
Overhead Triceps Extensions with Cable Pulley: 2 x 12-15  
Hammer Curls: 2 x 12-15  
Medicine Ball Crunches: 2 x 12-15  
Burpees: 2 x 12-15

#### TUESDAY: LOWER BODY

Barbell Squats: 3 x 8-12  
Jefferson Squats: 3 x 8-12  
Romanian Deadlifts: 3 x 8-12  
Hip Adduction Machine: 3 x 8-12  
Calf Raises: 2 x failure  
Calf Press: 2 x failure

#### WEDNESDAY: REST / LIGHT CARDIO

Focus on the following:  
Getting at least 8 hours of sleep  
Keeping your protein intake high  
Walking and stretching

#### THURSDAY: UPPER BODY

Dumbbell Flys: 3 x 8-12  
Lat Pulldown: 3 x 8-12  
Lateral Raises: 3 x 8-12  
Triangle Push-ups: 2 x 12-15  
Preacher Curls: 2 x 12-15  
Russian Twists: 2 x 12-15  
Plank: 2 x failure

File Saved in Client\_file directory:

```
ycao25sharon@Wed Dec 08]> cd Client_file
ycao25sharon@Wed Dec 08]> ls
Sharon_Cao.txt
ycao25sharon@Wed Dec 08]>
```

Output File:

```
1 Hi, Sharon Cao!
2 This is your customized information sheet.
3
4 BASIC INFORMATION
5 -----
6 Gender: F
7 Age = 24
8 Height: 176.17 cm (5.78 feet)
9 Weight: 66.22 kg (146 lbs)
10 BMI: 21.33
11
12 CARLORIES SECTION
13 -----
14
15 BMR Information:
16 The Basal Metabolic Rate (BMR) is the amount of energy (calories) your body needs while resting.
17
18 Your BMR: 1495.99
19 What is your active level?
20 1. Sedentary (little or no exercise);
21 2. Lightly active (light exercise/sports 1-3 days/week);
22 3. Moderately active (moderate exercise/sports 3-5 days/week);
23 4. Very active (hard exercise/sports 6-7 days a week);
24 5. Extra active (very hard exercise/sports & physical job or 2x training).
25
26 Your choice is: 3
27
28 Your daily calories need based on active level is 2318.78 calories.
29
30 GOALS AND ADVICE
31 -----
32
33 Your want to gain muscle!
34
35 SAMPLE EXERCISES:
36
37
38 -----
39 MONDAY: UPPER BODY
40     Incline Barbell Bench Press: 3 x 8-12
41     Barbell Rows: 3 x 8-12
42     Military Dumbbell Press: 3 x 8-12
43     Overhead Triceps Extensions with Cable Pulley: 2 x 12-15
44     Hammer Curls: 2 x 12-15
45     Medicine Ball Crunches: 2 x 12-15
46     Burpees: 2 x 12-15
```



47  
 48 TUESDAY: LOWER BODY  
 49 Barbell Squats: 3 x 8-12  
 50 Jefferson Squats: 3 x 8-12  
 51 Romanian Deadlifts: 3 x 8-12  
 52 Hip Adduction Machine: 3 x 8-12  
 53 Calf Raises: 2 x failure  
 54 Calf Press: 2 x failure  
 55  
 56 WEDNESDAY: REST / LIGHT CARDIO  
 57 Focus on the following:  
 58 Getting at least 8 hours of sleep  
 59 Keeping your protein intake high  
 60 Walking and stretching  
 61  
 62 THURSDAY: UPPER BODY  
 63 Dumbbell Flys: 3 x 8-12  
 64 Lat Pulldown: 3 x 8-12  
 65 Lateral Raises: 3 x 8-12  
 66 Triangle Push-ups: 2 x 12-15  
 67 Preacher Curls: 2 x 12-15  
 68 Russian Twists: 2 x 12-15  
 69 Plank: 2 x failure  
 70  
 71 FRIDAY: LOWER BODY  
 72 Split Squats: 3 x 8-12  
 73 Jump Squats: 3 x 8-12  
 74 Leg Curls: 3 x 8-12  
 75 Hip Abduction Machine: 3 x 8-12  
 76 Calf Press: 2 x failure  
 77 Seated Calf Raise: 2 x failure  
 78  
 79 SATURDAY AND SUNDAY: REST / LIGHT CARDIO  
 80 Focus on the following:  
 81 Getting at least 8 hours of sleep  
 82 Keeping your protein intake high  
 83 Walking and stretching  
 84  
 85

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- 86  
 87  
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