

CSE-3041 Data Science Programming Lab

Task-3

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Activity -1

Aim: To find the no of free chocolates got using python.

Algorithm:

1. Initially we initialize a variable with a constant value of 10 as we know we have to buy a minimum of 10 chocolates to get first free chocolate.
2. We get the no of free chocolates required from the user
3. We add 9 to the variable using for loop as we know that we already have 1 free chocolate which takes up the tally to 10 to get another free chocolate.
4. Finally, we print the result.

Code:

```
a=10
n=int(input("Enter the no.of free chocolates needed: "))
for i in range(1,n):
    a+=9
    n-=1
print("The no of chocolates you have to buy:",a)
```

Output:

```
In [6]: # chocolate wrapper question
# A J Dazzle 21MIA1119
a=10
n=int(input("Enter the no.of free chocolates needed: "))

for i in range(1,n):
    a+=9
    n-=1
print("The no of chocolates you have to buy:",a)
```

```
Enter the no.of free chocolates needed: 5
The no of chocolates you have to buy: 46
```

Activity – 2

Aim: To calculate the taxi fare using python.

Algorithm:

1. We get the no kilometers travelled by the user from the user.
2. We use if and else statement to calculate the fare.
If less than 4 km we initialize condition.
If more than 4 km we initialize another condition.

We calculate the fare using this formula: $cost = (10 * 4) + ((taxi_km - 4) * 14)$

3. We print the final result.

Code:

```
taxi_km=int(input("Enter the no of Km travelled:\n"))
if taxi_km<4:
    cost=10*taxi_km
    print("You have travelled less than 4 km so the fare will Rs.10 per Km")
else:
    print("You have travelled more than 4 km so the fare will be a basic fare of
Rs.40 along with Rs.14 for every 1 Km")
    cost=(10*4)+((taxi_km-4)*14)
print("Total fare=",cost)
```

Output:

```
In [7]: #taxi poblem
#A J Dazzle 21MIA1119
taxi_km=int(input("Enter the no of Km travelled:\n"))
if taxi_km<4:
    cost=10*taxi_km
    print("You have travelled less than 4 km so the fare will Rs.10 per Km")
else:
    print("You have travelled more than 4 km so the fare will be a basic fare of Rs.40 along with Rs.14 for every extra Km")
    cost=(10*4)+((taxi_km-4)*14)
print("Total fare=",cost)

Enter the no of Km travelled:
7
You have travelled more than 4 km so the fare will be a basic fare of Rs.40 along with Rs.14 for every extra Km
Total fare= 82
```