Class 3 - July 15th Notes

Ex 1: User Selection with Conditional Controls

Slide 8

```
convert = input("Do you want to convert MPH or PPM? ")
convert.lower()

if(convert=='mph'):
    mph = float(input("Enter speed in miles per hour: "))
    minpm = 3600/mph//60
    secpm = 3600/mph%60
    print("\nYour pace is
",format(minpm,'.0f'),":",format(secpm,'02.0f')," per mile",sep="")
elif(convert=='ppm'):
    minpace = float(input("Enter minutes value of pace per mile: "))
    secpace = float(input("Enter seconds value of pace per mile: "))
    mph = 3600/(minpace*60 + secpace)
    print("\nYour pace is ",format(mph,'.1f')," miles per
hour",sep="")
else:
    print("I don't understand your input.")
```

```
I don't understand your input.
```

Practise

```
###Demo user control while loop
cutoff = 90
keepGoing = "y"
while keepGoing == "y":
    daysDelinquent = int(input("Enter days delinquent: "))
    if daysDelinquent >= cutoff:
        print("The borrower does not qualify.")
    else:
        print("The borrower can apply for credit.")
    keepGoing = input("Do you wish to continue: y or n? ")
print("Good Day")
```

```
The borrower can apply for credit.
The borrower does not qualify.
Good Day
```

Ex 2: PPM Example to take multiple times from user with while: loop

Slide 14

```
condition = 'y'
while (condition=='y'):
    mph = float(input("Enter speed in miles per hour: "))
    minpm = 3600/mph//60
    secpm = 3600/mph%60
    print("\nYour pace is
",format(minpm,'.0f'),":",format(secpm,'02.0f')," per mile",sep="")
    condition = input("Do you wish to continue: y or n? ")
print("Code end.")


Your pace is 6:00 per mile

Your pace is 5:00 per mile
Code end.
```

Ex 3: Write for loops using range

Slide 17

```
for i in range(3,16,3):
    print(i, end=' ')

3 6 9 12 15

for i in range(20,4,-5):
    print(i, end=' ')

20 15 10 5

for i in range(0,3):
    print(i, end=' ')

0 1 2
```

Practise

```
###Demo User Control in Count loop
end=int(input("How many applicants do you wish to evaluate?"))
cutoff = 90
for num in range(end):
    daysDelinquent = int(input("Enter the number of days delinquent:
"))
    if daysDelinquent >= cutoff:
```

```
        print("The borrower does not quailify for an additional line
of credit.")
    else:
        print("The borrower can apply for credit.")
print("Good Day")
```

```
The borrower does not quailify for an additional line of credit.
The borrower can apply for credit.
The borrower can apply for credit.
Good Day
```

Ex 4 – Make User Control In Target Loop

Slide 19

```
n = int(input("Enter how many sales rep to rank: "))

print('Rank\tCommission')
print('--------------')

for number in range(n, 0,-1):
    commission = number/100*2
    print(number, '\t', format(commission,'.0%'))
```

```
Rank  Commission
--------------
10    20%
9     18%
8     16%
7     14%
6     12%
5     10%
4     8%
3     6%
2     4%
1     2%
```

Practise

```
### Running total Demo: this program calculates the sum of a series
 # of numbers entered by the user.

MAX = 2

total = 0
print(type(total))
print('This program calculates the sum of')
print(MAX, 'numbers you will enter.')
```

```
for counter in range(MAX):
        number = float(input('Enter a number: '))
        total  +=  number

print('The total is', total)

<class 'int'>
This program calculates the sum of
2 numbers you will enter.
The total is 5.0
```

Ex5: Running Total of an Account Balance

Slide 23

```
bal = float(input("Enter the account balance? "))
n = int(input("Enter the number of withdrawls? "))

for i in range(n):
    withdrawl = float(input("How much would you like to withdrawal?
"))
    bal -= withdrawl
print("The ending balance is: ${}".format(bal, '.2f'))

The ending balance is: $184.93
```

Ex5.1

```
bal = float(input("Enter the account balance? "))
withdrawl = float(input("Enter withdrawal amount or enter 0 to end.
"))

while withdrawl!=0:
    bal -= withdrawl
    withdrawl = float(input("Enter withdrawal amount or enter 0 to
end. "))

print("The ending balance is: ${}".format(bal))

The ending balance is: $98.0
```

Ex5.2

```
balance = float(input("What is the opening balance? "))

withdrawal = float(input("Enter withdrawal amount or enter 0 to end:
"))

while withdrawal != 0:
```

```
    if withdrawal < 0:
        print("You can't withdraw a negative value!!!")
        print("Balance is: ${:.2f}".format(balance))
    elif withdrawal > balance:
        print("You have insufficient funds!!! Withdrawal cannot exceed
${:.2f}".format(balance))
    else:
        balance -= withdrawal
        print("The ending balance is: ${:.2f}".format(balance))
    withdrawal = float(input("Enter another value or 0 to end: "))
```

```
You can't withdraw a negative value!!!
Balance is: $100.00
You have insufficient funds!!! Withdrawal cannot exceed $100.00
The ending balance is: $98.00
```