

## ITP 449, FALL 2020

### HOMEWORK 1

30 POINTS

For each one of the following questions, write Python code in PyCharm. For each question, create a new Python file. Name it *HW1\_Q1\_lastname\_firstname.py* etc. Create a header in each file using *comments* to display your name and HW information. After that write your Python code.

```
# Tommy Trojan
# ITP 449 Fall 2020
# HW1
# Question 1
```

1. Write a program that prompts the user to enter a password then prints the length of the password.  
*Enter your password: hello*  
*Your password is 5 long.*
2. Write a program that prompts the user to enter their full name then prints the number of characters in their name (do not count spaces).  
*What is your name? Nitin Kale*  
*Nitin Kale your name has 9 characters.*
3. Write a program that prompts the user to enter a month (as a number), then prints the name of the month and the number of days in that month.  
*Enter the month number: 9*  
*September has 30 days*
4. Write a program that prompts the user to enter a loan amount, annual interest rate, and number of years for a car loan. Then it prints the monthly payment amount.  
*Loan Amount: 30000.00*  
*Annual Interest Rate: 4.00*  
*Years: 5*  
*Your monthly payment is: \$552.50*

*Note:*

$$PMT = \frac{PV i (1 + i)^n}{(1 + i)^n - 1}$$

*PMT is the monthly payment*

*PV is the loan amount*

*i is the interest rate per month in decimal form (interest rate percentage divided by 12)*

*n is the number of months (term of the loan in months)*

5. Write a program to that prompts the user to enter their first name. It then prints whether or not their name is a [palindrome](#).

*What is your name? Nitin*

*Nitin, your name is a palindrome!*

Zip all files together and submit it on Blackboard.