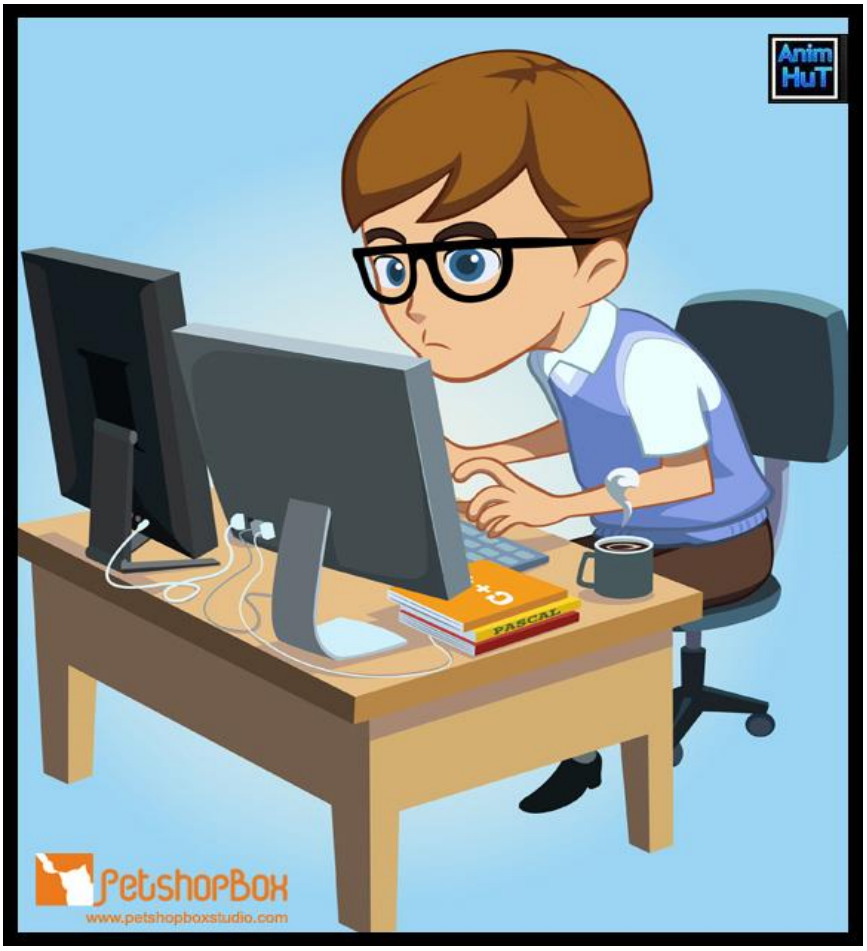
QAP 1 – May 8 - 14, 2023



- **All projects in this QAP will be completed individually.**

- **All projects are due by Sunday, May 14, 2023. Each project is to be attached in the assignment portal of Microsoft Teams.**

- **I will allow questions at the beginning of each class of normal lectures during the week for any issues that may arise.**

(5 pts per project for a total of 20 pts)

Project 1 - Presentation

During week 1 you viewed several videos and we instructed to create a PowerPoint. This is now the first project of this QAP. Your presentation should include an appropriate title page, 3 slides on computer components, 3 slides on timeline events, 3 slides on catastrophes, 3 slides on careers, and a final slide based on one of the items from the site "10 Things Every Programmer Should Know". Include some features based on what was covered in the primer that was presented during lectures. You may include a Section Header Slide before each new section in your presentation.

Project 2 – Python Program

Include comments, constants, and blank lines for readability.

The Edsel Car Rental Company rents automobiles for $55.00 per day and 24 cents per kilometer traveled.

Allow the user to enter the customer's name, their phone number, number of days the car was rented, the mileage when the car was rented, and the mileage when the car was returned.

Display each input value along with the total number of kilometers traveled, the cost for the rental (the daily cost plus the mileage cost), the HST (on the daily cost only) using a rate of 15%, and the total rental cost.

Project 3 – Python Program

Include comments, constants, and blank lines for readability.

Widgets Inc. requires a program to calculate employee payroll. Define at least 2 constants. Enter the employee's name, hours worked, the number of widgets produced on Monday, Tuesday, Wednesday, Thursday, and Friday – this will be 5 variables and 5 input statements.

Regular pay is found by multiplying the hours worked by the hourly pay rate of $19.50. The commission is calculated using .35 cents for each widget produced. The gross pay is the regular pay plus the commission. All employees pay 21% of their gross pay in income tax, 4.95% in CPP, and 1.6% in EI contributions. Union dues are $18.00 per person per pay period. Find the total deductions by adding the income tax, CPP, EI and the union dues. The net pay is the gross pay less the deductions.

Display results to the screen including the employee's name, the total number of widgets produced, the regular pay, commission, and gross pay, the income tax, CPP, EI, union dues, total deductions, and the net pay.

Project 4 – Web Design

1. Create a web page called Computers.html as defined below. Note that some spacing / wrapping may not be the same based on different programs / browsers.

2. Add a new section after the "Great Computer Quotes …" section and before the last horizontal rule. Add an appropriate heading and include the following: a list – either ordered or unordered, centered text, and one other feature of your choice – you may look it up in the book or research a topic on the internet. Explain your feature at the end of the HTML document in a paragraph.

History of the Computer

In The Beginning ...

The history of computers starts out about 2000 years ago, with the birth of the abacus. When the beads on the abacus are moved around, according to programming rules memorized by the user, all regular arithmetic problems can be done. In 1671, Gottfried Wilhelm von Leibniz invented a computer that was built in 1694. It could add, and, after changing some things around, multiply. About a century later Thomas of Colmar created the first successful mechanical calculator that could add, subtract, multiply, and divide.

Other Memorable Events …

- In 1812, Babbage realized that many long calculations were really a series of predictable actions that were constantly repeated. He began to design an automatic mechanical calculating machine, which he called a difference engine.

- Herman Hollerith and James Powers made a step towards automated computing with the development of punched cards. Reading errors were reduced dramatically, workflow increased, and stacks of punched cards could be used as memory of almost unlimited size. For more than 50 years, punched card machines did most of the world's first business computing.

- The start of World War II produced a large need for computer capacity. In 1942, John P. Eckert and John W. Mauchly decided to build a high - speed electronic computer to do the job. Known as ENIAC, this machine could multiply two numbers at a rate of 300 per second.

- Early in the 50's two important engineering discoveries changed the image of the computer field - Magnetic Core Memory and Transistor - Circuit Elements. These technical discoveries quickly found their way into computers. Such computers were mostly found in large computer centers operated by industry, government, and private laboratories.

- In the 1960's, efforts to design and develop the fastest possible computer with the greatest capacity reached a turning point with the Stretch computer by IBM. Stretch was made with the fastest access time, and total capacity in the vicinity of 100,000,000 words.

- Many companies, some new to the computer field, introduced programmable minicomputers supplied with software packages in the 1970's. The "shrinking" trend continued with the introduction of personal computers (PC's), which are programmable machines small enough and inexpensive enough to be purchased and used by individuals. Many companies, such as Apple Computer and Radio Shack introduced very successful PCs in the 1970's.

- By the late 1980's, some personal computers were run by microprocessors that, handling 32 bits of data at a time, could process about 4,000,000 instructions per second.

- Computer networking, e-mail and the Internet, and electronic publishing are just a few of the applications that have grown in recent years. Computers continue to decrease in price, offering the promise that soon, "computers will reside in most homes, offices, and schools".

Great Computer Quotes ...

"Men are form Mars, Women are from Venus, Computers are from Hell."
~Author Unknown

"Give a person a fish and you feed them for a day;
teach that person to use the Internet and they won't bother you for weeks."
~Author Unknown

"To err is human, but to really foul things up requires a computer."
~Farmer's Almanac, 1972
