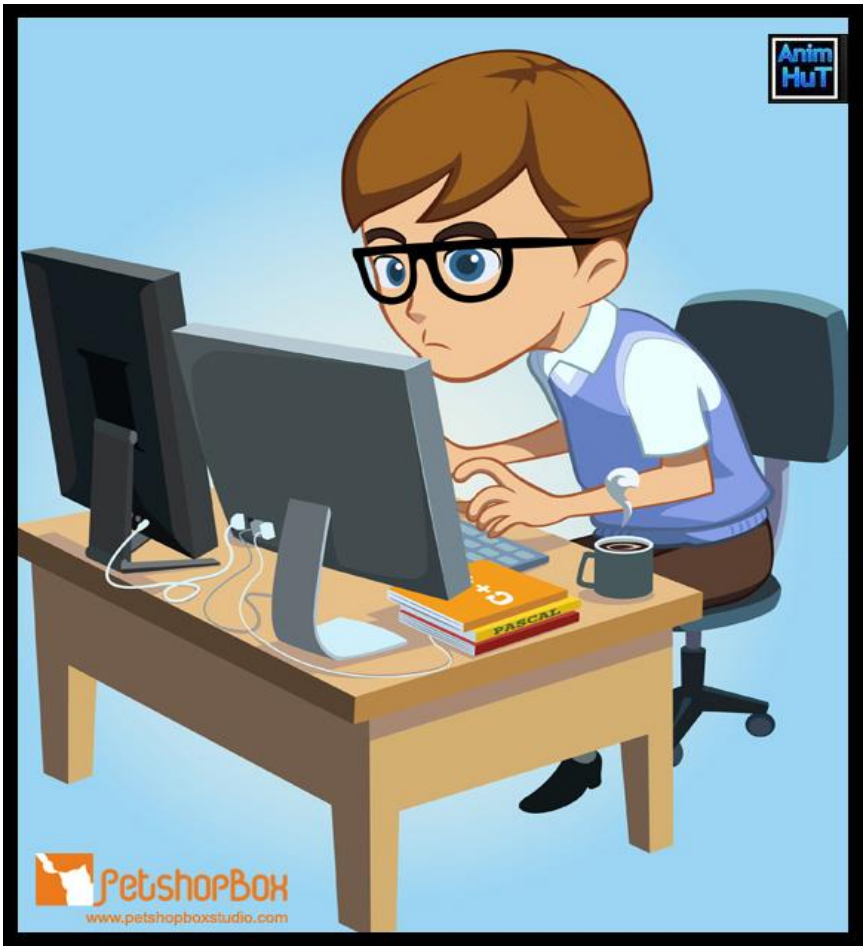
QAP 1 – Jan 10 - 17, 2025



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

- **All projects are due by Friday, Jan 17, 2025.**

- **This assessment will be set up in the Assignment Portal of the Teams set up for this term. Project 1 will be posted to the Essentials Team Assignment Portal, Project 2 to the Python Team Assignment Portal, and Project 3 to the Web Design Team Portal.**

Assessment Policies for SD Faculty

All assignments play a crucial role in enhancing students' learning by reinforcing the learning objectives as the course progresses through various topics; therefore, the timely completion of all assignments is extremely important. Assignments offer valuable insights into students' understanding of the course materials and provide valuable feedback. Additionally, they aid instructors in evaluating the achievement of the course's intended learning outcomes.

Below are excerpts from the relevant sections of the student handbook regarding this policy.

2.5 Tutoring

Tutoring is free to students who receive approval from the designated College Administrator. Students seeking such assistance should see the Campus Administrator. Students should also note that a **maximum number of hours** per student per semester are available.

Please also make use of all the available learning support within the Software Development program (Faculty, TAs, Peer tutors, and Peers).

2.10 Graduation Requirements

To receive a diploma, the student must:

- Successfully complete all coursework…

5.2 Course Outlines

Course outlines stating the course summary, prerequisites, evaluation procedures, and pass marks are distributed to students on the first day of classes. ...

Students in the Software Development program are evaluated based on skills acquired and are assigned a grade of Pass, Pass Outstanding, or Fail.

6.1 Assignments

This excerpt has been adapted to fit the Software Development program.

If an extension is required for any assignment, students must communicate with the course instructor who may determine a new assignment due date based on the student's individual circumstances. Assignment extensions are not guaranteed. Students will not be eligible for a PASS OUTSTANDING for a late assignment. The PASS OUTSTANDING designation incorporates professionalism and the ability to keep to deadlines. All assignments must be submitted via MS TEAMS.

All assignments will be graded based on the following:

- On time, graded following the assignment marking guide
- 1 to 3 days late, 10% deducted
- 4 to 7 days late, 20% deducted
- > 7 days late, 0%

NOTE: Assignments that are more than 7 days late may still be submitted for correcting and feedback; however, a grade of 0% will still be assigned.

Project 1 – Presentation (Value – 10 pts)

During week 1 you viewed several videos and were 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 (Value – 10 pts)

Include comments, constants, and blank lines for readability. The Edsel Car Rental Company rents automobiles for $75.00 per day and 26 cents per kilometer traveled.

Allow the user to enter the customer's name, their phone number, number of days the car was rented, the odometer reading when the car was rented – use a 5 digit integer – ie: 99999, and the odometer reading when the car was returned – again use a 5 digit integer – ie: 99999. Make sure the numbers are reasonable – the mileage when returned must be larger the mileage when the car was rented – also make sure numbers are reasonable – don't use 100 and 94756 – this is unrealistic – for example, a rental will be between 100 and 1000 km in total for 5 days.

Calculate the total kilometers travelled by subtracting the returned odometer reading from the rented odometer reading.

The rental cost is calculated by multiplying the number of days the car was rented by the rate of $75.00 per day. The mileage cost is calculated by multiplying the total kilometers travelled by the rate of .16 cents per kilometer. The insurance cost is calculated as the number of days rented by a rate of $19.00 per day.

The company has decided to offer a discount for any rentals during this winter. Calculate the discount at 10% off the rental cost and 25% off the mileage cost. The total discount is these two values added together.

The total rental cost is determined as the rental cost plus the mileage cost plus the insurance cost less the total discount.

Calculate the HST by multiplying the total rental cost by the HST rate of 15%.

The final invoice total is the total rental cost plus the HST.

Display each input value along with all the calculated values including the total number of kilometers traveled, the rental cost, the mileage cost, the insurance cost, the discount (as a single value), the total rental cost, the HST, and the final invoice total.

Project 3 – Web Design (Value – 10 pts)

1. Create the web page below and name it index.html. Note that some spacing / wrapping may not be the same based on different programs / browsers. Let the wrapping take place as normal – do not force it to match this document. Case and spelling will be strongly enforced.

2. Add a new section after the "Great Computer Quotes …" section and before the last horizontal rule that you research and organize. Add an appropriate heading and include the following: text as paragraphs, a list – either ordered or unordered, centered text, and any other feature discussed in class as you feel necessary. This is noted at the end of the document below.

3. Add one new HTML 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 document – after the last horizontal rule - as a paragraph with a brief description of what you have done. This is noted at the end of the document below. Don't just add a feature for the sake of adding a feature – make sure it works with the page.

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 from 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

My New Section ...

Content for the new section.

Description of the new html feature or tag that you included on your page.