**Exercise 1.1 and 2.2 Answers**

* 1. It is said that government spending on IT is increasing as government departments take initiatives to improve customer service or have a wider reach of services. Find out what factors are responsible for the increase of IT spending by government agencies. Also list and explain the three biggest IT projects undertaken by the federal government in recent times?
* **There are various factors which are responsible for the increase of IT spending by government**:
  + Provide Ease of Service to People: For Example, dealing with government related artifacts like Passport, Visa, Driving License would be very time consuming and inefficient if there were no software to book slots based on the availability of the government servers.
  + Improve Cybersecurity: A lot of crimes happen on the internet towards naïve people. Now due to many improvements and enhancements in various Search Engines and Browsers, most of the cyber-attacks are prevented but there is a lot of scope for improvement for more accuracy in detecting the cyber-attacks.
  + Healthcare: With modern technologies finding cures for diseases which aren’t there is becoming more easier day by day. For example, Covid-19 could get worse than what it was if there was no technology. As it made people aware regarding the situation every second due to which people were cautious about it and followed precautions. Also, in finding the antidote, it is believed that technology played an important role.
* **3 Biggest IT Projects by Federal Government**:
  + Passport Program Modernization Initiative:
    - This programs aim is to digitalize the process of passport generation and approvals of new as well as the renewal passports.
    - The Funding for this is the fees that the public pay to get their new or renewed passports.
    - The Launch of this project was set in Fall 2023, however further developments and enhancements would be continued.
  + Biometrics Expansion:
    - The projects aim is to have an effective screening and verification process for visa processing.
    - The idea behind this is to capture and screen ten-digit fingerprint biometrics and all the Port of Entry’s(POE). This will help in reduce the time taken to process application and verification as well.
  + Export Import Controls System (EICS) II – Application Renewal:
    - As the trading of goods across borders has increased significantly, the need for such system would help in speeding up the process of renewals.
    - The process of this is pretty straight forward, as the person needs to submit an application and it will be further verified and checked if it will comply with relevant regulations.
    - The main significance of this project is to maintain the information of traders and have control over export and import of goods.

2.2 Go to some open-source projects and find out about their project charters. Find out why they have those project charters.

* **OpenCV:** 
  + OpenCV (Open Source Computer Vision Library) is an open source computer vision and machine learning software library. OpenCV was built to provide a common infrastructure for computer vision applications and to accelerate the use of machine perception in the commercial products.
  + As the Charter suggests, the main idea behind this project is to have a library which will help in reading visual data like pictures and videos which will be helpful in Artificial Intelligence and Machine Learning studies.
  + It provides the general usage of the project and using this the user will be able to easily decide or judge whether this would be helpful for them or not.
* **Wine:**
  + Wine is a free and open-source compatibility layer to allow application software and computer games developed for Microsoft Windows to run on Unix-like operating systems. Developers can compile Windows applications against WineLib to help port them to Unix-like systems. Wine is predominantly written using black-box testing reverse-engineering, to avoid copyright issues. No code emulation or virtualization occurs. Wine is primarily developed for Linux and macOS..
  + The significance of this project is to help the users in running windows applications in Linux based Operating System.
  + Using this information it is helpful for the user in both the ways, whether he/she can contribute to the project or if they are only here to use the project. The high lever description of the project in the charter is really helpful in understanding with minimal knowledge.