CEC 470 – Homework 1

Cameron Stark

Review Questions

1.3: What are the four main functions of a computer?

1.4: List and briefly define the main structural components of a computer.

1.5: List and briefly define the main structural components of a processor.

1.6: What is a stored program computer?

1.8: List and explain the key characteristics of a computer family

Problems

1.4: Given the memory contents of the IAS computer shown below, show the assembly language code for the program, starting at address 08A. Explain what the program does.

|  |  |
| --- | --- |
| address | Contents |
| 08A | 010FA210FB |
| 08B | 010FA0F08D |
| 08C | 020FA210FB |

1.5: In figure 1.6, indicated the width, in bits, of each data path.

1.7: The relative performance of the IBM 360 Model 75 is 50 times that of the 360 Model 30, yet the instruction cycle time is only 5 times as fast. How do you account for this discrepancy?