ITC-6000

Assignment 1

July 7, 2020

[YOUR NAME]

# Question 1

**Use the table from the data file below to answer these questions regarding file structure:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| First | Last Name | ID | Hours | GrossPay | Withholding | NetPay | PayDate |
| Roger | McHaney | 1 | 38.5 | $561.56 | $112.31 | $449.25 | 10/23/2000 |
| Roger | McHaney | 1 | 38.5 | $561.56 | $112.31 | $449.25 | 1/17/2000 |
| Telly | O'Grady | 2 | 30 | $489.06 | $97.81 | $391.25 | 3/1/2000 |
| Telly | O'Grady | 2 | 30 | $489.06 | $97.81 | $391.25 | 2/22/2000 |
| Telly | O'Grady | 2 | 20 | $326.04 | $65.21 | $260.83 | 2/28/2000 |
| Telly | O'Grady | 2 | 20 | $326.04 | $65.21 | $260.83 | 3/6/2000 |
| Telly | O'Grady | 2 | 44.5 | $725.44 | $145.09 | $580.35 | 1/21/2000 |
| Telly | O'Grady | 2 | 44.5 | $725.44 | $145.09 | $580.35 | 1/17/1998 |
| Grant | Brikestein | 3 | 18 | $408.60 | $81.72 | $326.88 | 10/23/2000 |
| Grant | Brikestein | 3 | 18 | $408.60 | $81.72 | $326.88 | 1/17/2000 |
| Alarry | Abu | 4 | 40 | $728.80 | $145.76 | $583.04 | 1/17/2000 |
| Betty | Marygrade | 5 | 35 | $792.40 | $158.48 | $633.92 | 1/17/2000 |
| Samuel | Timod | 6 | 40 | $927.20 | $185.44 | $741.76 | 1/17/2000 |

1. **How many records does this file contain?**

1. **How many fields are there per record?**
2. **What problem would you encounter if you tried to create a listing by last name?**
3. **What are the field names? Separate by semicolon.**
4. **What other problems do you see?**

# Question 2

**Answer the following two questions in paragraph form:**

1. **A database system is made up of five major parts. Identify these parts. Provide specifics of what make up these components.**

1. **A DBMS provides at least nine functions. Identify these functions and provide a brief explanation of each**

# Question 3

# A conceptual model provides a bird's-eye view of a database. Conceptual models are derived from the business rules that make up an application.

From the following business rules, create a conceptual model.

Business Rules:

* An author writes books.
* A book is written by one or more authors.
* A book has one subject.
* A subject has at least 20 books.
* A book is published in a year]

1. **Identify the entities involved in the problem and determine the relationships that exist between entities.**
2. **Create and paste below your conceptual model.**