## Question 1: (20 Points) MD5

Answer: **b6ad4e8d31ed3d750830637ca5ca3812** Lab1.txt

Question 2: (20 Points) MD5

Answer: **b6ad4e8d31ed3d750830637ca5ca3812** Lab1\_new.txt

* The MD5 Value is the same since it is based/calculated on the file content, not file name. I only changed the name of the file so the MD5 Value didn’t change (it didn’t have the reason to change).

Question 3: (20 Points) MD5

Answer: **b6ad4e8d31ed3d750830637ca5ca3812** Lab1\_new\_new.txt

* The MD5 Value is the same as in previous questions because it is calculated/based on the file content, not file name. Since the text "Computer Systems Forensics" is identical to the content used in the previous questions, the MD5 checksum is the same regardless of the file name being different.

Question 4: (20 Points) MD5

Answer: **1346cf92c903d75090623a17398898aa** Lab1\_new\_new.txt

* I didn’t get the same MD5 value as in previous questions because the content of the file is different. Adding “New Line” caused the content of the file to be different – it changed, and that in turn caused the MD5 Value to be different compared to previous questions.

## Question 1: (20 Points) SHA256

Answer: **7c47225585b100b770ebf4cea102ddf27d86f2ea313ce814957f7aa34a156550** Lab1.txt

Question 2: (20 Points) SHA256

Answer:

**7c47225585b100b770ebf4cea102ddf27d86f2ea313ce814957f7aa34a156550** Lab1\_new.txt

* I got the same Value as in previous question. SHA256 hash is generated based on the content of the file, not its name. Since the content of the file remains unchanged, the SHA256 Value is identical.

Question 3: (20 Points) SHA256

Answer:

**7c47225585b100b770ebf4cea102ddf27d86f2ea313ce814957f7aa34a156550** Lab1\_new\_new.txt

* I got the same SHA256 value as in Questions 1 and 2. This is because the SHA256 hash is calculated based on the content of the file. Since the text "Computer Systems Forensics" is identical to the content used in the previous questions, the SHA256 checksum remains the same.

### Question 4: (20 Points) SHA256

Answer:

**d6708b95cb242aec1b20be4cfac11a6f93f158cfbca571fced7aa109ff5f012e** Lab1\_new\_new.txt

* I got a different SHA256 value. The SHA256 hash is calculated based on the content of the file. Since i added the text "NEW LINE " before "Computer Systems Forensics", the content of the file has changed. Even a small change in the content will result in a completely different SHA256 checksum.

Question 6: (10 Points)

Answer:

To investigate whether my important files were compromised, and to determine which ones were changed, I would follow these steps:

1. Calculate the current SHA256 Hash Values.

* For example, I would use Notepad++.

1. Compare with previous SHA256 Hash Values.

* Compare current SHA256 Hash Values with last known Hash Values to determine which files have changed.

1. Identify changed files.
2. Compare the content of changed files:

* Use file comparison tool if backup of files is present/existent.
* Use File Recovery tools if backup of original files is non-existent or not currently available.

1. Check for System and Access Logs:

* Look at system logs and user activity logs for any signs of unauthorized access or suspicious activities.
* Check access control logs to see who accessed the files.

1. Analyze the Logs:

* Review the logs to understand what might have happened over the weekend.
* Look for unusual or unauthorized activities that might explain why the files were changed.