**IoT Security and Privacy**

**Assignment 5 – AWS IoT Core**

**(10 points)**

### Instructions

**Please read the instructions carefully. Those students who fail to follow the instructions may get a zero score for this assignment.**

1. This is a team assignment. Each team can have at most **two** students while the assignment can be completed by one student. Each group member MUST submit the assignment report even if it is the same. Students who do not submit the report get zero for the assignment.
2. Answer each question following the original question. Do NOT delete the original question.
3. Answers to all questions must be put into **ONE** document.
4. Students must put answers following each question in this assignment. The instructor will not grade a report with only answers in it and the student gets zero for such an assignment. An assignment report must include original questions.
5. Students MUST submit the finished assignment in either Microsoft Word or pdf format to Blackboard. The doc must be submitted as ONE standalone file and cannot be tarred or zipped into a container.
6. All required files or docs must be submitted in one submission. Note: Blackboard allows unlimited number of submissions of one assignment by students and the instructor counts only the last one.
7. Refer to [Print screen](http://en.wikipedia.org/wiki/Print_screen) on how to take a screenshot.
8. Underlined blue text points to a web link. Ctrl + Click to follow link.

**Questions**

Students are asked to repeat the work in the tutorial [Network Security on ESP32 through Amazon AWS IoT](https://github.com/xinwenfu/Network-Security-on-ESP32/tree/main).

1. For [Create AWS account](https://github.com/xinwenfu/Network-Security-on-ESP32/tree/main#1-create-aws-account), include a screenshot of your AWS IoT portal when you log into the portal. (1 point)
2. For [Create AWS IoT policy and Object](https://github.com/xinwenfu/Network-Security-on-ESP32/tree/main#2-create-aws-iot-policy-and-object), include a screenshot of created policy in AWS IoT. (1 point)
3. For [Configure esp-aws-iot](https://github.com/xinwenfu/Network-Security-on-ESP32/tree/main#4-configure-esp-aws-iot),
   1. Please includea screenshot of configured WiFi. (1 point)
   2. Includea screenshot of configured AWS IoT endpoint hostname. (1 point)
   3. Please includea screenshot of the folder *src->certs* with correct content within VS Code. (1 point)
4. For [Test esp-aws-iot](https://github.com/xinwenfu/Network-Security-on-ESP32/tree/main#5-test-esp-aws-iot),
   1. Please includea screenshot of AWS IoT Core’s MQTT test client receiving messages from the ESP32. (1 point)
   2. Please includea screenshot of the ESP32 receiving messages from the AWS IoT Core’s MQTT test client. (1 point)
5. For [Create DynamoDB table and AWS IoT rule](https://github.com/xinwenfu/Network-Security-on-ESP32/tree/main#6-create-dynamodb-table-and-aws-iot-rule)
   1. Include a screenshot of the created DynamoDB table within AWS IoT. (1 point)
   2. Include a screenshot of created AWS IoT rule within AWS IoT. (1 point)
6. For [Save DHT22 Data into DynamoDB of AWS](https://github.com/xinwenfu/Network-Security-on-ESP32/tree/main#7-save-dht22-data-into-dynamodb-of-aws), include a screenshot of saved AHT data in the DynamoDB table within AWS IoT. (1 point)