

# SureView Systems - Extended Development Questions

## Question 1: C# Desktop and Web

### Background

The SureView Response system receives alarms from security devices in one of the following message formats:

- "The alarm id from video server number X is Y."
- "Alarm id Y has been received from video server number X."

Where X (server number) and Y (alarm number) are integer values depending on the alarm, for example, real messages might be:

- "The alarm id from video server number 7 is 10."
- "Alarm id 10 has been received from video server number 7."

### Task

We need a C# application which:

1. Allows the user to enter a message in either of the formats above.
2. Parses the message and extracts the two integer values from it.
3. Shows the user what values were extracted from the message for "server number" and "alarm number".

Please create two code solutions to this task:

1. One as a C#.NET Web application.
2. One as a C#.NET Desktop application.

For the Web Application please also include client side validation of some kind too.

## Question 2: SQL

### Background

The system has two tables in its MS SQL Database:

- "Device" which contains a list of security devices and their connection details, with columns "DeviceID" (primary key), "IPAddress", "Name"
- "DeviceCamera" which contains a list of cameras connected to each device, with columns "DeviceID" (foreign key), "CameraNumber", "Name" For example, there may be a Device with two cameras on it, number 1 called "Front Door" and number 2 called "Back door".

### Task

Write queries to achieve the following:

1. Get the camera details of all the cameras on device ID 1
2. Get the device details of all devices which have a camera (exclude any that don't)
3. Get the device details of all devices which have a camera name starting with "Front"
4. Change the name of the 2nd Camera of the device with a DeviceID of 1984 to "Front Door Camera"

## Review and Submission

In particular, we will be looking at the following aspects of your answer:

- Ability to read and understand your code and queries.
- Robustness of code and whether it can be caused to fall over with bad data.
- User interface (for the C# question): look, feel, and ease of use.

Please zip the complete code solution including all files (compiled files too) for both C# projects for Question 1 along with the SQL query file for Question 2 and email to: [jobs@sureviewsystems.com](mailto:jobs@sureviewsystems.com)

Please Note: you will need to rename the attachment extension to get it through our mail filters just add ".rename" to the end of the .zip extension). You may also share a Google Drive, OneDrive or WeTransfer link.