

# 6090: Security of Computer and Embedded Systems

## Problem Sheet 3

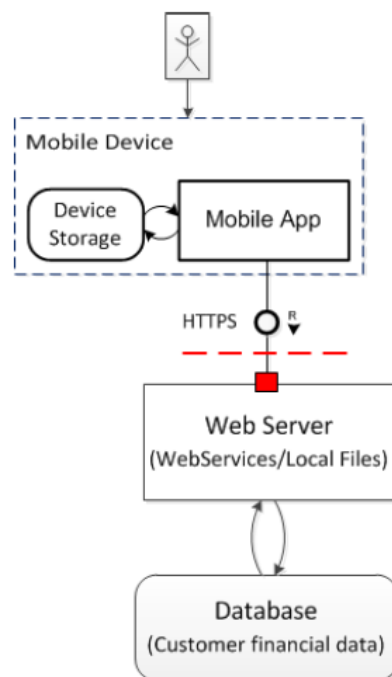
### *Threat Modelling*

In this problem sheet, we will deepen our knowledge in modelling and assessing software security risks and threats.

#### 1. Threat Modelling: Introduction

In the following exercises, we will improve our understanding of risks, threats, and the impact of software vulnerabilities.

##### Exercise 1: *Threat Identification*



**Figure 1:** Mobile Architecture

Figure 1 shows a widely used architecture for mobile applications that can access local (on-device) storage and communicates with a server with a data base tier.

The STRIDE threat modelling covers the following threats:

- Spoofing Identity
- Tampering with Data
- Repudiation
- Information Disclosure
- Denial of Service
- Elevation of Privilege

Assume you are a security expert in a threat modelling workshop for an application using this architecture. What questions would you ask in a threat modelling workshop? Name one question for each threat class of the STRIDE approach.

## References

1. Ross J. Anderson. Security Engineering: A Guide to Building Dependable Distributed Systems. John Wiley & Sons, Inc., New York, NY, USA, 1st edition, 2001. The complete book is available at: <http://www.cl.cam.ac.uk/~rja14/book.html>