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4 1 Chapter Heading

$$a \times b = c \,, \tag{1.1}$$

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$$a \times b = c$$

$$\mathbf{a} \cdot \mathbf{b} = \mathbf{c}$$
(1.2)

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1.2 Section Heading 5

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  - a. Livelihood and survival mobility are oftentimes coutcomes of uneven socioe-conomic development.
  - b. Livelihood and survival mobility are oftentimes coutcomes of uneven socioe-conomic development.
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#### Subparagraph Heading

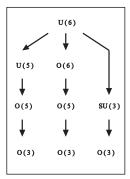
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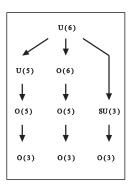
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Fig. 1.1 If the width of the figure is less than 7.8 cm use the sidecapion command to flush the caption on the left side of the page. If the figure is positioned at the top of the page, align the sidecaption with the top of the figure – to achieve this you simply need to use the optional argument [t] with the sidecaption command



6 1 Chapter Heading

**Fig. 1.2** Please write your figure caption here



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Table 1.1 Please write your table caption here

Classes	Subclass	Length	Action Mechanism
Translation	mRNA <sup>a</sup>	22 (19–25)	Translation repression, mRNA cleavage
Translation	mRNA cleavage	21	mRNA cleavage
Translation	mRNA	21–22	mRNA cleavage
Translation	mRNA	24–26	Histone and DNA Modification

<sup>&</sup>lt;sup>a</sup> Table foot note (with superscript)

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Type 1 That addresses central themes pertaining to migration, health, and disease. In Sect. 1.1, Wilson discusses the role of human migration in infectious disease distributions and patterns.

1.3 Section Heading

Type 2 That addresses central themes pertaining to migration, health, and disease. In Sect. 1.2.1, Wilson discusses the role of human migration in infectious disease distributions and patterns.

7

#### 1.3.1 Subsection Heading

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*Proof.* Proof text goes here.  $\Box$ 

Paragraph Heading

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$$a \times b = c \tag{1.3}$$

#### **Problems**

**1.1.** A given problem or Excercise is described here. The problem is described here. The problem is described here.

#### 1.2. Problem Heading

- (a) The first part of the problem is described here.
- (b) The second part of the problem is described here.

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10 1 Chapter Heading

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# Chapter 2 Contiki OS

Assuming this is the structure...

#### 2.1 Security in Contiki OS

The Contiki OS has some component implemented in the security aspect. Several factors need to be taken into account when selecting security components to be used in the application, including:

- The trade-off between security and performance, such as the overhead of bandwidth, energy consumption, etc. Usually a higher level of security comes with more reduction in performance.
- The capability of the potential adversary. For example, passive eavesdropping is a common type of attack in a Wireless Sensor Networks scenario. Further more, if the device is exposed in an open environment then side channel attacks<sup>1</sup> need also be taken into consideration. In some cases legitimate users can also considered malicious, say users who try to tamper with their smart meter readings.
- The hardware and software setup of the platform. For instance, the AES coprocessor provided in CC2538 platform provides a great performance in both computation time and energy consumption; the latency induced by ContikiMAC can make attacks exploit the packet timing information more difficult.

However, due to the constrained resources and variant applications, implementing security protocols poses great difficulties in Contiki OS as well as other embedded operating systems.

<sup>&</sup>lt;sup>1</sup> Attacks that exploit physical metadata, e.g. power consumption, timing information, etc.

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## 2.1.1 Link Layer Security

Link Layer Security, or LLSEC, is an 802.15.4 implementation in Contiki OS.

## 2.1.2 DTLS

# Appendix A Chapter Heading

#### All's well that ends well

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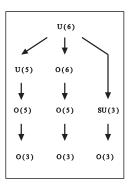
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$$\mathbf{a} \times \mathbf{b} = \mathbf{c}$$
$$\mathbf{a} \times \mathbf{b} = \mathbf{c}$$
 (A.1)

#### A.1.1.1 Subsubsection Heading

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Table A.1 Please write your table caption here

Classes	Subclass	Length	Action Mechanism
Translation	mRNA <sup>a</sup>	22 (19–25)	Translation repression, mRNA cleavage mRNA cleavage mRNA cleavage Histone and DNA Modification
Translation	mRNA cleavage	21	
Translation	mRNA	21–22	
Translation	mRNA	24–26	

<sup>&</sup>lt;sup>a</sup> Table foot note (with superscript)

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# **Solutions**

## **Problems of Chapter 1**

- **1.1** The solution is revealed here.
- 1.2 Problem Heading
- (a) The solution of first part is revealed here.
- (b) The solution of second part is revealed here.