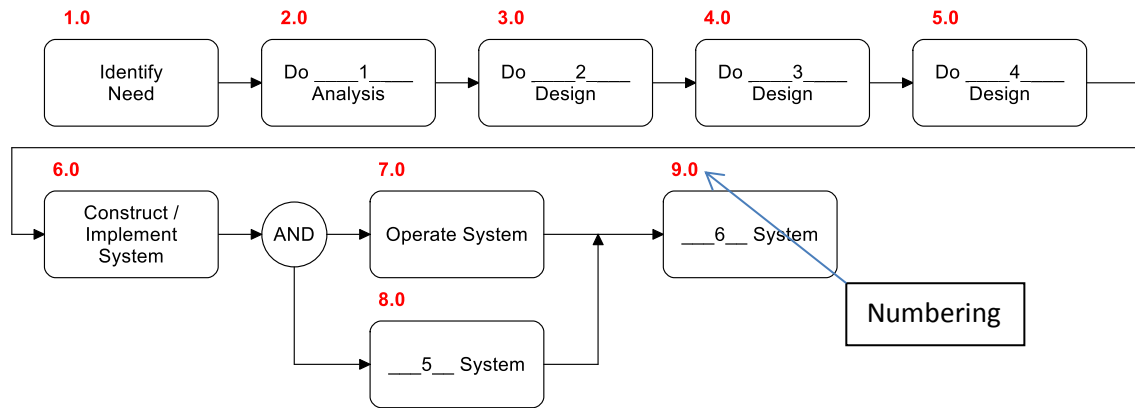# Ontwerp 2017 / Design 2017

**Voorletters en van / Initials and surname:  Memorandum 2017**

**Vraag 1 / Question 1 – Lewensiklus / Life cycle**



Voeg die uitstaande details in vir die lewensiklusvloei hierbo / *Add the missing details in the life cycle flow above*:

1: Requirements Analysis

2: Conceptual Design

3: Preliminary Design

4: Detail Design

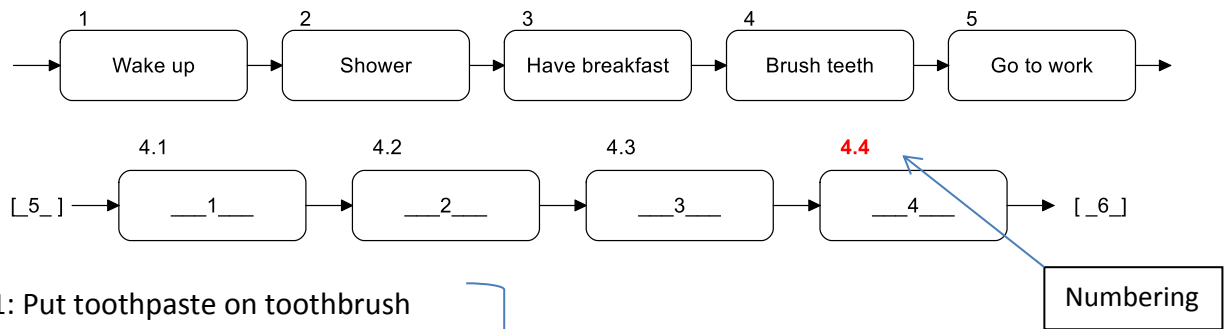5: Maintain System

6: Retire / Upgrade System

**Vraag 2 / Question 2 – Vereistes / Requirements**

Noem 5 belangrikste vereistes van 'n stelsel soos bespreek in die klas, en soos van toepassing op die produkte wat in 2017 ontwerp word. / Name the 5 most important requirements of a system as discussed in class, applicable to the products that will be designed in 2017:

1: Functional requirements (what?) - as part of form/fit/function

2: Performance (how well?)

3: Environmental (where / under which conditions?)

4: Physical (form)

5: Interface (fit)

## Vraag 3 / Question 3 – Funksionele vloei / Functional flow

### Tooth brushing...

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Wake up | Shower | Have breakfast | Brush teeth | Go to work |

| 4.1 | 4.2 | 4.3 | **4.4** |
|---|---|---|---|
| ___1___ | ___2___ | ___3___ | ___4___ |

[_5_]  →  ...  →  [ _6_]

Numbering

1: Put toothpaste on toothbrush

2: Wet toothbrush with water

3: Brush teeth

4: Clean toothbrush

Any 4 sensible instructions with VERBS

5: REF 4.0: Brush teeth

6: REF 5.0: Go to work

## Vraag 4 / Question 4 – Argitektuur / Architecture

Voltooi die volgende diagram na die beste van jou vermoë / *Complete the following diagram to the best of your ability*:

### Access control system - Card readers

**Unit 1**

I/F1       I/F2       I/F3

**Unit 2**       **Unit 3**       **Unit 4**

Operators

Card Reader       Network       Central Card System

I/F4

**Unit 5**

Database / Storage
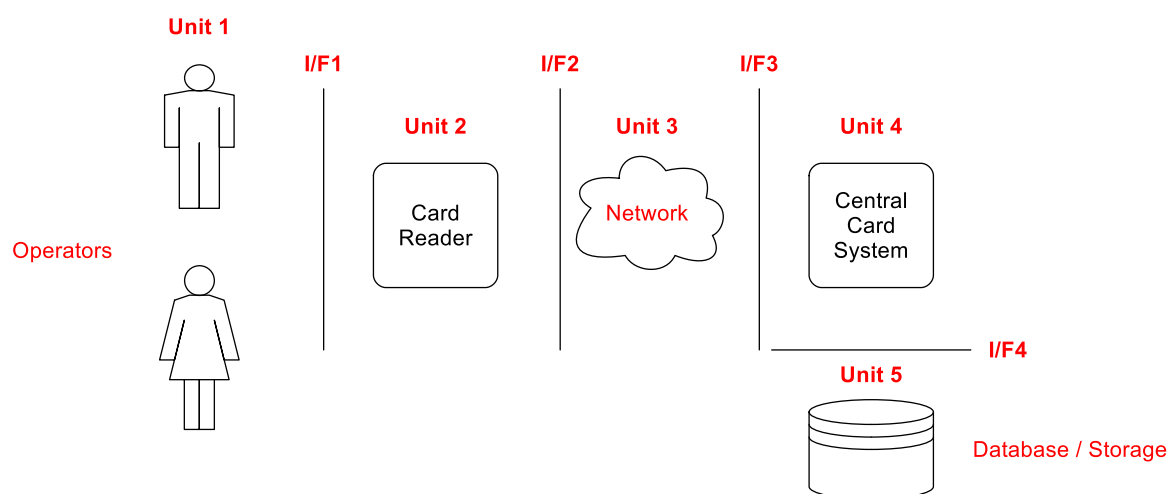
**Bonusvraag / Bonus question:**  Hoe lank is 'n stuk tou? / How long is a piece of string?

What will it be used for (function), where will it be used (fit), and what must it be made of (form)? Any form/fit/function question is the answer...