

## Exercise 2

TDT4137

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Assuming person's name and phone number is already retained in the working memory. Also assuming it is known how the keyboard and favourites menu works.

**a**

### Unit tasks

- Call
- Open call screen
- Dial number
- Select name from favourite list
- Make the call

### Top-level

Method to accomplish goal of making a call

Step 1.	Get next unit task information
Step 2.	Decide: If no more unit tasks, then return with goal accomplished
Step 3.	Accomplish the goal of <u>performing the unit task</u>
Step 4.	Goto 1

Selection rule set for the goal of performing the unit task

If the task is <i>call</i> , then accomplish the goal of <u>calling</u>
If the task is <i>open call screen</i> , then accomplish the goal of <u>opening call screen</u>
If the task is <i>dial number</i> , then accomplish the goal of <u>dialling number</u>
If the task is <i>select name from favourite list</i> , then accomplish the goal of <u>selecting name from favourite list</u>
If the task is <i>make the call</i> , then accomplish the goal of <u>making the call</u>
Return with goal accomplished

**b**

## Command methods

Method to accomplish goal of calling

Step 1.	Accomplish the goal of <u>opening call screen</u>
Step 2.	Decide: If call method is <i>dial number</i> Then accomplish the goal of <u>dialling number</u> Else accomplish the goal of <u>selecting name from favourite list</u>
Step 3.	Accomplish the goal of <u>making the call</u>
Step 4.	Return with goal accomplished

Method to accomplish goal of making the call

Step 1.	Recall that the button is the big green one, and accomplish the goal of <u>pressing the button</u>
Step 2.	Return with goal accomplished

Method to accomplish goal of opening keyboard

Step 1.	Recall that the button is "Tastatur", and accomplish the goal of <u>pressing the button</u>
Step 2.	Return with goal accomplished

Method to accomplish goal of opening favourites menu

Step 1.	Recall that the button is "Favoritter", and accomplish the goal of <u>pressing the button</u>
Step 2.	Return with goal accomplished

Method to accomplish goal of dialling number

Step 1.	Decide: If all digits are pressed Then return with goal accomplished
Step 2.	<u>Recall</u> next digit to press
Step 3.	Accomplish goal of <u>pressing digit button</u>
Step 4.	<u>Forget</u> next digit to press
Step 5.	Goto 1

Method to accomplish goal of selecting name from favourite list

Step 1.	<u>Recall</u> person name
Step 2.	Accomplish the goal of <u>pressing person's name button</u>
Step 3.	<u>Forget</u> person name, and return with goal accomplished

Method to accomplish goal of pressing a button

Step 1.	<u>Recall</u> button name and <u>retrive from LTM</u> the icon for it, and <u>retain</u> the icon
Step 2.	<u>Recall</u> the icon, and locate it on the screen
Step 2.	Move finger to the icon
Step 3.	Press finger on screen
Step 4.	<u>Recall</u> the icon, and verify that it is pressed
Step 5.	Remove finger from screen
Step 6.	<u>Forget</u> icon, <u>forget</u> button name, and return with goal accomplished

## Selection methods

Selection rule set for the goal of opening call screen

If the call method is <i>dial number</i> , then accomplish the goal of <u>opening keyboard</u>
If the call method is <i>favourite method</i> , then accomplish the goal of <u>opening favourites menu</u>
Return with goal accomplished

## C

### Dialling

- Method for accomplishing goal of calling

- Step 1. Accomplish the goal of opening call screen
  - Method for accomplishing goal of opening call screen
  - Step 1.1. If the call method is *dial number*, then accomplish the goal of opening keyboard
    - \* Method for accomplishing goal of opening keyboard
    - \* Step 1.1.1. Recall that the button is "Tastatur"
    - \* Step 1.1.2. Accomplish the goal of pressing the button
      - Method for accomplishing goal of pressing button
      - Step 1.1.2.1. Recall button name and retrieve from LTM the icon for it, and retain the icon
      - Step 1.1.2.2. Recall the icon, and locate it on the screen
      - Step 1.1.2.3. Move finger to the icon
      - Step 1.1.2.4. Press finger on screen
      - Step 1.1.2.5. Recall the icon, and verify that it is pressed
      - Step 1.1.2.6. Remove finger from screen
      - Step 1.1.2.7. Forget icon, forget button name, and return with goal accomplished
    - \* Return with goal accomplished
  - Return with goal accomplished
- Step 2. Accomplish the goal of dialling number
  - Method for accomplishing goal of dialling number
  - Step 2.1 Decide: If all digits are pressed Then return with goal accomplished
  - Step 2.2 Recall next digit to press
  - Step 2.3 Accomplish goal of pressing digit button
    - \* Method for accomplishing goal of pressing button
    - \* Step 2.3.1. Recall button name and retrieve from LTM the icon for it, and retain the icon
    - \* Step 2.3.2. Recall the icon, and locate it on the screen
    - \* Step 2.3.3. Move finger to the icon
    - \* Step 2.3.4. Press finger on screen
    - \* Step 2.3.5. Recall the icon, and verify that it is pressed
    - \* Step 2.3.6. Remove finger from screen
    - \* Step 2.3.7. Forget icon, forget button name, and return with goal accomplished
  - Step 2.4 Forget next digit to press
  - Repeat 7 times...
  - Return with goal accomplished

- Step 3. Accomplish the goal of making the call
  - Method for accomplishing goal of making the call
  - Step 3.1. Recall that the button is the big green one
  - Step 3.2. Accomplish the goal of pressing the button
    - \* Method for accomplishing goal of pressing button
    - \* Step 3.2.1. Recall button name and retrieve from LTM the icon for it, and retain the icon
    - \* Step 3.2.2. Recall the icon, and locate it on the screen
    - \* Step 3.2.3. Move finger to the icon
    - \* Step 3.2.4. Press finger on screen
    - \* Step 3.2.5. Recall the icon, and verify that it is pressed
    - \* Step 3.2.6. Remove finger from screen
    - \* Step 3.2.7. Forget icon, forget button name, and return with goal accomplished
  - Return with goal accomplished
- Return with goal accomplished

## Using favourites menu

- Method for accomplishing goal of calling
- Step 1. Accomplish the goal of opening call screen
  - Method for accomplishing goal of opening call screen
  - Step 1.1. If the call method is *use favourites menu*, then accomplish the goal of opening favourites menu
    - \* Method for accomplishing goal of opening favourites menu
    - \* Step 1.1.1. Recall that the button is "Favoritter"
    - \* Step 1.1.2. Accomplish the goal of pressing the button
      - Method for accomplishing goal of pressing button
      - Step 1.1.2.1. Recall button name and retrieve from LTM the icon for it, and retain the icon
      - Step 1.1.2.2. Recall the icon, and locate it on the screen
      - Step 1.1.2.3. Move finger to the icon
      - Step 1.1.2.4. Press finger on screen
      - Step 1.1.2.5. Recall the icon, and verify that it is pressed
      - Step 1.1.2.6. Remove finger from screen
      - Step 1.1.2.7. Forget icon, forget button name, and return with goal accomplished
  - \* Return with goal accomplished

- Return with goal accomplished
- Step 2. Accomplish the goal of selecting name from favourites menu
  - Method for accomplishing goal of selecting name from favourites menu
  - Step 2.1 Recall person name
  - Step 2.2 Accomplish the goal of pressing person's name button
    - \* Method for accomplishing goal of pressing button
    - \* Step 2.2.1. Recall button name and retrieve from LTM the icon for it, and retain the icon
    - \* Step 2.2.2. Recall the icon, and locate it on the screen
    - \* Step 2.2.3. Move finger to the icon
    - \* Step 2.2.4. Press finger on screen
    - \* Step 2.2.5. Recall the icon, and verify that it is pressed
    - \* Step 2.2.6. Remove finger from screen
    - \* Step 2.2.7. Forget icon, forget button name, and return with goal accomplished
  - Step 2.4 Forget person name, and return with goal accomplished
  - Return with goal accomplished
- Step 3. Accomplish the goal of making the call
  - Method for accomplishing goal of making the call
  - Step 3.1. Recall that the button is the big green one
  - Step 3.2. Accomplish the goal of pressing the button
    - \* Method for accomplishing goal of pressing button
    - \* Step 3.2.1. Recall button name and retrieve from LTM the icon for it, and retain the icon
    - \* Step 3.2.2. Recall the icon, and locate it on the screen
    - \* Step 3.2.3. Move finger to the icon
    - \* Step 3.2.4. Press finger on screen
    - \* Step 3.2.5. Recall the icon, and verify that it is pressed
    - \* Step 3.2.6. Remove finger from screen
    - \* Step 3.2.7. Forget icon, forget button name, and return with goal accomplished
  - Return with goal accomplished
- Return with goal accomplished