

LAB WRK SC2 ,

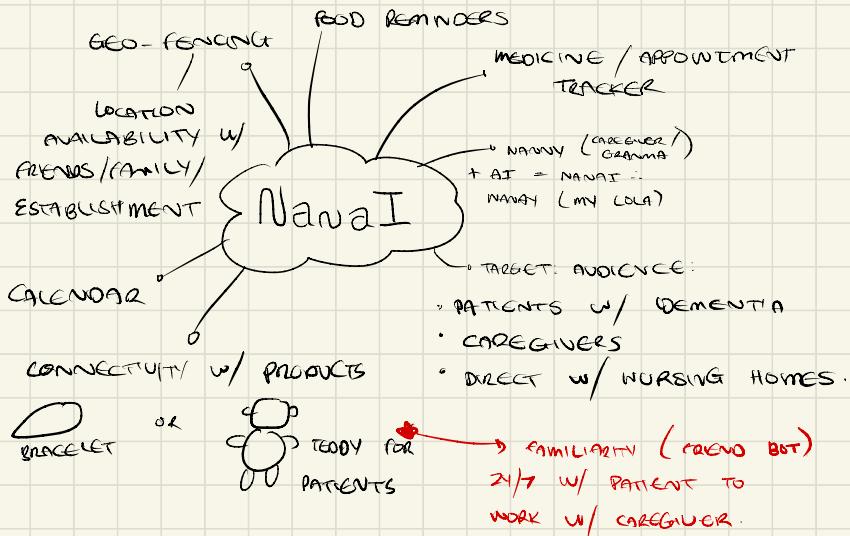
# IDEAS

21/09/23

[1]



[2]



# DEMENTIA

"... UMBRELLA TERM FOR A NUMBER OF NEUROLOGICAL CONDITIONS, OF WHICH THE MAJOR SYMPTOM INCLUDES A GLOBAL DECLINE IN BRAIN FUNCTION." ref. WEB.

- COLLECTION OF SYMPTOMS CAUSED BY DISORDERS AFFECTING THE BRAIN.
  - ↳ THINKING → MEMORY → BEHAVIOUR
- UNIQUE EXPERIENCE TO EACH CASE
  - ↳ DYNAMIC UI

## EARLY SIGNS (CHALLENGES)

COMMON SYMPTOMS	APP FEATURE IDEAS
<ol style="list-style-type: none"> <li>1. <u>MEMORY LOSS</u></li> <li>2. <u>CHANGES IN PLANNING</u> + <u>PROBLEM-SOLVING ABILITIES</u></li> <li>3. <u>DIFFICULTY IN COMPLETING EVERY-DAY TASKS</u></li> <li>4. CONFUSION ABT <u>TIME + PLACE</u></li> <li>5. TROUBLE @ <u>RECOGNIZING</u> (OBJECTS / PEOPLE), <u>DISTANCES</u>, <u>DEPTH + SPACE</u>.</li> <li>6. DIFF. @ <u>SPEECH</u>, <u>WRITING</u> + <u>COMPREHENSION</u>.</li> <li>7. MISPLACES OBJECTS + <u>INABILITY TO RETRACE STEPS</u>.</li> <li>8. DECREASED / POOR JUDGEMENT</li> <li>9. ↘ w/ <u>WORK + SOCIAL ACT.</u> <small>INTER w/ others w/ same cases</small></li> <li>10. <u>CHANGES IN MOOD + PERSONALITY</u>.</li> </ol>	<ul style="list-style-type: none"> <li>● ACTIVITY + EXERCISE</li> <li>■ EVENTS</li> <li>● 1. CALENDAR</li> <li>2. TASK-MANAGEMENT</li> <li>3. HOURLY REMINDER (?)</li> <li>"IT IS <u>3PM</u> @ THE <u>GRAND PLAZA</u> <small>TIME RACE</small>".</li> <li>● AR:           <ul style="list-style-type: none"> <li>- DISTANCE / DEPTH / SPACE CALCULATION</li> <li>- (BRACELET): DETECT IF HOLDING / DROPPING ITEM.</li> <li>- STEPS TRACKER</li> </ul> </li> <li>● SELF-AFFIRMATION EXERCISES</li> <li>● MEMORY BOOK (?)</li> </ul>

# • [ Nana I ]

connection

## TARGET USERS

- NURSING FACILITIES
- PEOPLE (under 65) → LEVELS OF TECH.  
SKILLS, UI SIMPLICITY.
- OVER 65 (1/10 cases)
- OVER 85 (3/10 cases) } MAIN FOCUS

## WHY BEHAVIOUR COULD CHANGE?

- INABILITY TO COMMUNICATE THE SAME
- PHYSICAL CHANGES IN THE BRAIN
  - ↳ AFFECTS:
    - MEMORY
    - MOOD
    - BEHAVIOUR
- ENVIRONMENT STIMULATION
  - ↳ PROVIDE FAMILIAR STIMULATION
    - ex. SONGS / SOUNDS
      - FAMILY VOICE RECORDING
- DIFFICULTY IN TASKS
  - ↳ BREAKDOWN IN STEPS

"ANGER AND AGGRESSION ARE OFTEN DIRECTED AT FAMILY MEMBERS AND CARERS BECAUSE THEY ARE CLOSEST. THE BEHAVIOUR IS OUT OF THE PERSON'S CONTROL AND THEY MAY FEEL FRIGHTENED. THEY MAY NEED REASSURANCE, EVEN IF IT DOES NOT APPEAR THAT WAY." ref. web

# [ Nana I ]

## STRATEGIES (POV. AI)

### 1 [ STRESS - ANALYSIS ]

→ DETECT LEVEL OF STRESS, IF HIGH...

- WARNING: "PLEASE GIVE ME SPACE,  
(fr PHONE/  
BRACELET.) I FEEL OVERWHELMED." (EXAMPLE)
- ALERT ASSIGNED GUARDIAN.

SAFETY

USER IF  
ALERTED

5  
+ NOTE: MAY BE RESOURCEFUL BUT IT  
ALWAYS BEST SCENARIO TO ASK PROFESSIONALS.

→ PATTERN RECOGNITION

- RECORD BREAKDOWN INCIDENTS &  
HIGHLIGHT MAIN/COMMON TRIGGERS

### 1 [ TASK MANAGEMENT ]

→ REMINDERS OF EVENTS FOR THE DAY  
& WHEN TO DO THESE.

EX. "@ 3PM WE HAVE AN APPOINTMENT  
when WITH DR. SMITH @ THE HOSPITAL."  
who WHERE

ALLERGIES - MAY BE  
THEY ARE ALLERGIC TO PARADOL.

### \* [ DRUG RECOGNITION / MEMORY ] (MAYBE)

{ AR } → CHECKS TABLET.  IBUPROFEN

NOTE: LIST OF  
THEY ARE ALLERGIC TO PARADOL.

EXAMPLE: "THIS IS AN IBUPROFEN TABLET. WHAT  
IBUPROFEN WILL BELIEVE OUR  
HEADACHE WHY"

+ NOTE: AI / TECH. MAY BE  
ALWAYS BEST SCENARIO TO ASK PROFESSIONALS.

< IF USER\_WANTS TO KNOW MORE : >

"I WILL MAKE A NOTE TO ASK DR. SMITH  
ABOUT IBUPROFEN IN THE NEXT APPOINTMENT."

}

# [ Nana I ]

"WHAT IS CERTAIN THOUGH IS THAT THE PERSON'S ABILITIES WILL DETERIORATE." ref. WEB

## LEVELS OF DEMENTIA



# • [ Nana I ]

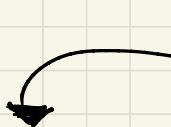
"... THE PERSON STILL KEEPS THEIR SENSE OF **TOUCH** AND **HEARING**, AND THEIR ABILITY TO **RESPOND TO EMOTION.**" ref. web

↳ focus on **FEATURES**.

## \* MCI: MILD COGNITIVE IMPAIRMENT

AKA MILD NEUROCOGNITIVE DISORDER

↳ DECLINE IN MEMORY + OTHER COGNITIVE ABILITIES



### AMNESTIC MCI

- SUBTLE CHANGES IN MEMORY

#### ↑ THINKING:

FORGET INFORMATION WHICH PREVIOUSLY WAS EASY TO REMEMBER:

- APPOINTMENTS
- RECENT EVENTS
- CONVERSATIONS



### NON-AMNESTIC MCI

- AFFECT OTHER COGNITIVE ABILITIES

- THINKING SKILLS
- CHANGES IN:
  - > LANGUAGE
  - > ATTENTION
  - > DECISION-MAKING
  - > PERCEPTION TO REALITY.

## TYPES OF DEMENTIA

common

1. ALZHEIMER'S DISEASE
2. VASCULAR DEMENTIA
3. LEWY BODY DISEASE
4. FRONTOTEMPORAL DEMENTIA
5. ALCOHOL - RELATED DEMENTIA

6. DOWN SYNDROME + ALZHEIMER'S DISEASE
7. HIV ASSOCIATED DEMENTIA
8. CTE DEMENTIA
9. CHILDHOOD DEM.

# • [ Nana I ]

## ALZHEIMER'S DISEASE [1]

### PHYSICAL BRAIN CONDITION

- IMPAIRED MEMORY, THINKING AND BEHAVIOUR
- INDIVIDUAL'S ABILITIES DETERIORATE OVER-TIME
- COMMON @ OLDER AGE

### SYMPOMTS:

- SHORT-TERM MEMORY LOSS (EX. RECENT EVENTS)
- REPETITION
- CHANGES IN ABILITY TO PLAN, PROBLEM SOLVE, ORGANISE & THINK LOGICALLY.
- SLOWER @ ROUTINE TASKS
- LANGUAGE & COMPREHENSION DIFFICULTIES
- DISORIENTATION WITH TIME, PLACE & PERSON
- DECREASE IN MOTIVATION / INITIATING TASKS
- BEHAVIOURAL, PERSONALITY & MOOD CHANGES.

FOCUS ON APP. FUNCTIONALITY

## VASCULAR DISEASE [2]

{ BRAIN DAMAGE CAUSED BY BLOOD-FLOW RESTRICTION  
IN THE BRAIN.

AFFECTS: REASONING, PLANNING, JUDGEMENT & ATTENTION

common causes pr. STROKES, HIGH-BLOOD PRESSURE/DIABETES IN SMALL VESSELS.

PRONE TO  
HAPPEN AGAIN

\* DETECTION DEVICE (?)

FOOD DIETRY  
PLAN

# • [ Nana I ]

## FRONTOTEMPORAL DEMENTIA [3]

DAMAGE TO EITHER / BOTH THE FRONTAL OR TEMPORAL LOBES OF THE BRAIN.

AFFECTS: BEHAVIOUR, PERSONALITY, LANGUAGE & MOVEMENT

### (1) BEHAVIOURAL - VARIANT FRONTOTEMPORAL DEMENTIA

- FRONT LOBES AFFECTED FIRST.
- MAN CHANGES w/ PERSONALITY & BEHAVIOUR
- AFFECTS: JUDGEMENT, EMPATHY & FORESIGHT.
  - > EXERCISES FOCUS ON EMOTIONS
  - 👉 > EMPHASISE (SOOTHING MECHANISM) ON REPETITIVE MOTOR BEHAVIOUR;
    - COLLECTING
    - COUNTING
  - EX. SONG RHYTHMS

### (2) PRIMARY PROGRESSIVE APHASIA

- TEMPORAL LOBES AFFECTED FIRST.
- LANGUAGE IMPAIRMENT:

#### [a] SEMANTIC DEMENTIA

INABILITY TO ASSIGN MEANING TO WORDS, FIND THE CORRECT WORD / NAME OF PEOPLE OR OBJECTS.

#### [b] PROGRESSIVE NON-FLUENT APHASIA

PROBLEMS WITH SPEAKING; STUTTERING, SLOW / SLURRED SPEECH.

- DIFFICULTIES FOLLOWING CONVERSATIONS
- DECLINE IN ABILITY TO WRITE & READ

• [ Nana I ]

# NOTES:

- > CHECK APPS (FIRST-HAND)
- > MAIN FEATURES (UMNATIONS)

• AGAPE