UcanACT
Physical Activity for Cancer Prevention

UCANACT APP (deliverable D3.2)

Contribution to WP3 – Design of the Pilot Programme Methodology and Tools

Co-funded by the European Union

Authors

- University of Bologna (UNIBO)

With the Support of:

- Europe Region of World Physiotherapy
- Outdoor Against Cancer (OAC)

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1. Abbreviations and Acronyms

CES	Citizens Engagement Strategy
CPPA	Cancer Prevention Physical Activity
HEPA	Health Enhancing Physical Activity
IPAQ-SF	International Physical activity questionnaire- Short Form
PA	Physical Activity
PIM	Practical Intervention Methodology
PUGS	Public Urban Green Spaces

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2. Introduction to UcanACT

The UcanACT project, "Urban ACTion for cancer prevention: adult and senior citizens practice physical activity within public urban green spaces to prevent cancer diseases," is an intersectoral initiative funded by the European Union. The initiative brings together physiotherapists, local authorities, non-profit organisations, higher education institutions, and research institutions from eight organisations in five EU countries. Coordinated by the Europe Region of World Physiotherapy, the UcanACT project aims to engage adults and senior citizens over the age of 50 who never have suffered from cancer diseases (primary prevention), who were diagnosed with cancer (secondary prevention) or who are cancer survivors (tertiary prevention), in practicing physical activity (PA) as a tool for cancer prevention within public urban green spaces (PUGS).

To apply physical activity as a tool for cancer prevention, the project partners reviewed scientific research demonstrating the positive benefits of physical activity for cancer prevention among adults and senior citizens, with a specific focus on outdoor physical activity sessions. These research activities formed the foundation for two key project deliverables: the Citizens Engagement Strategy (CES) and the Practical Intervention Methodology (PIM). These tools are the pillars of the implementation phase of the UcanACT project, which consist of kick-off trainings and executing Pilot cancer-preventive physical activity (CPPA) actions to test and validate the physical activity exercises, outlined in PIM, developed during the preparation phase.

UcanACT implementation phase will be supported by two additional tools:

1) the Massive Open Online Course (MOOC) for the training of physiotherapists and health professionals guiding participants during the Pilot CPPA actions;

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2) the UcanACT App for supporting the participants in performing CPPA when not supervised by physiotherapists or health professionals during the Pilot CPPA actions in the three project pilot territories - namely Bologna (Italy), Kilkenny (Ireland), and Munich (Germany).

The Pilot CPPA actions will be organised from 2024 within two rounds and run for about 12 weeks each. The first one will test and validate PIM with a special focus on adjusting it to the three project pilot territories and PUGS, while testing also the UcanACT App in terms of its functionality and target group needs.

Then, data regarding the PIM, CES, and the UcanACT App usage and acceptance will be analysed during the evaluation period between the first and second round of Pilot CPPA actions, to optimise the updated versions that will be validated during the second Pilot CPPA action.

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3. Design of UcanACT App

UcanACT App structure was designed based on cooperative inputs by UcanACT partners and exploiting the rationale and content of the Practical Intervention Methodology. It aims to support the subjects participating in the Pilot CPPA actions in performing cancer-preventive physical activity when not supervised by physiotherapists or health professionals.

3.1 UcanACT App functions

At first access, the user registers using their email and chooses the User Id and password that will allow login and personal identification for continuative use.

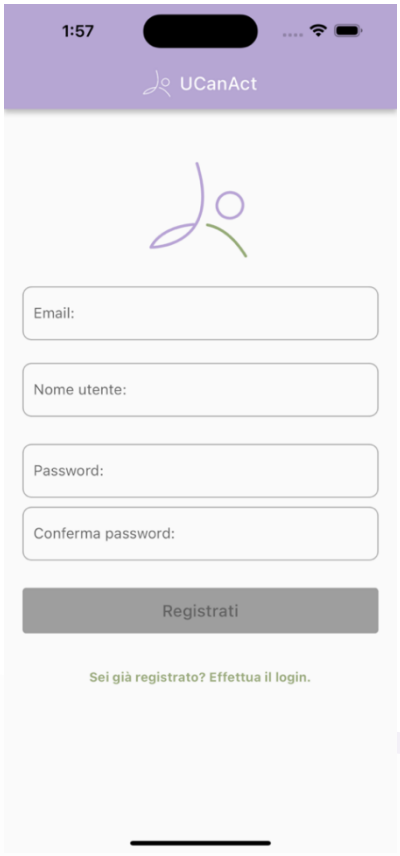

Figure 1. Registration

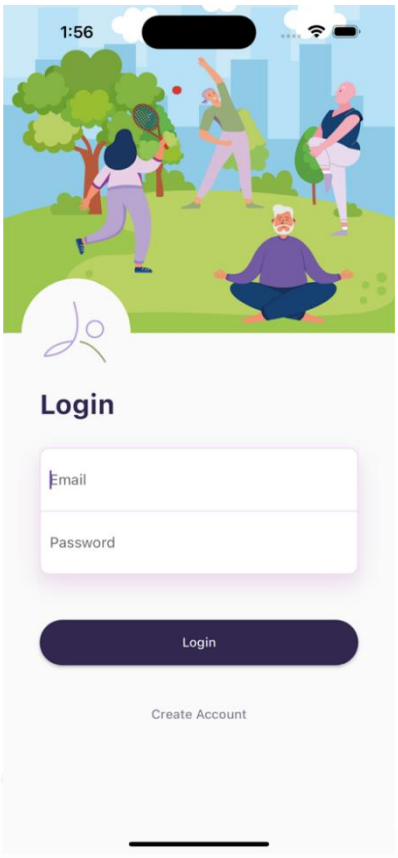

Figure 2. Login

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At first login, the user is requested to fill in IPAQ-SF, and declare the presence of possible frailty conditions relevant for PA practice (i.e., diabetes, bone metastasis, lymphedema, ostomy bag, peripheral neuropathy, sun safety, osteoporosis, frailty), according to the PIM.

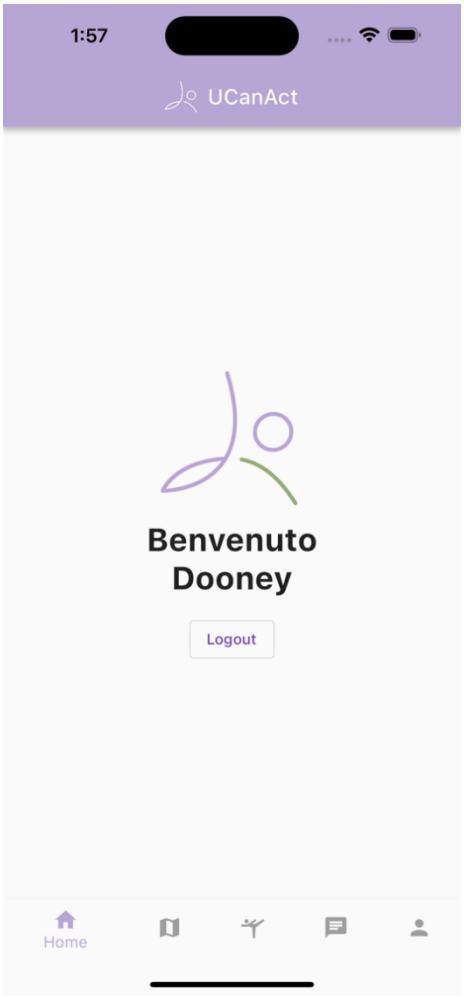

Figure 3. Login

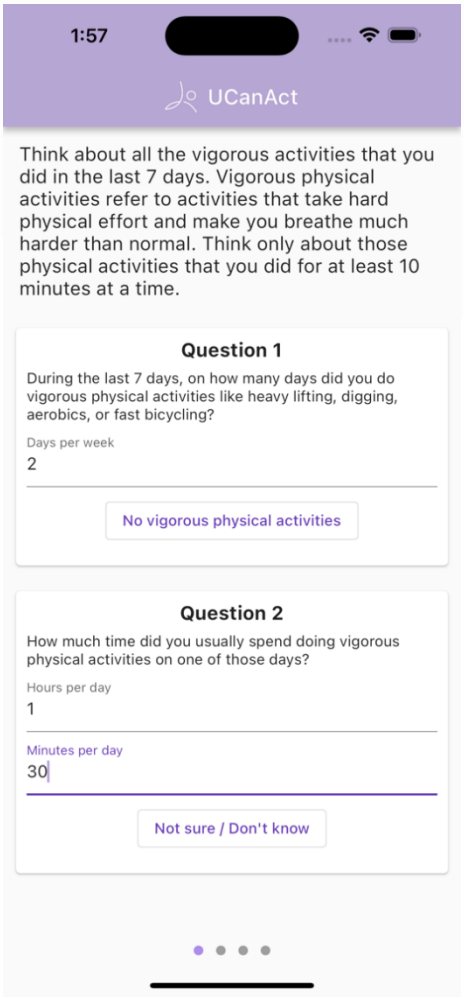

Figure 4. Questionnaire

The responses to the questionnaire are not stored but used to associate a fitness level (1-Inactive, 2-Minimally Active, 3-HEPA) and a possible attribute of frailty (excluding the safe performance of specific exercises) to the user. These parameters are used to define a training programme for the user, constructed according to PIM (see deliverable D3.1, page 53). The exercises composing the

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training programme (i.e., warm-up, aerobic, strengthening, balance, flexibility, cool-down) are selected from the App database based on the user fitness level and taking into account their potential condition of frailty.

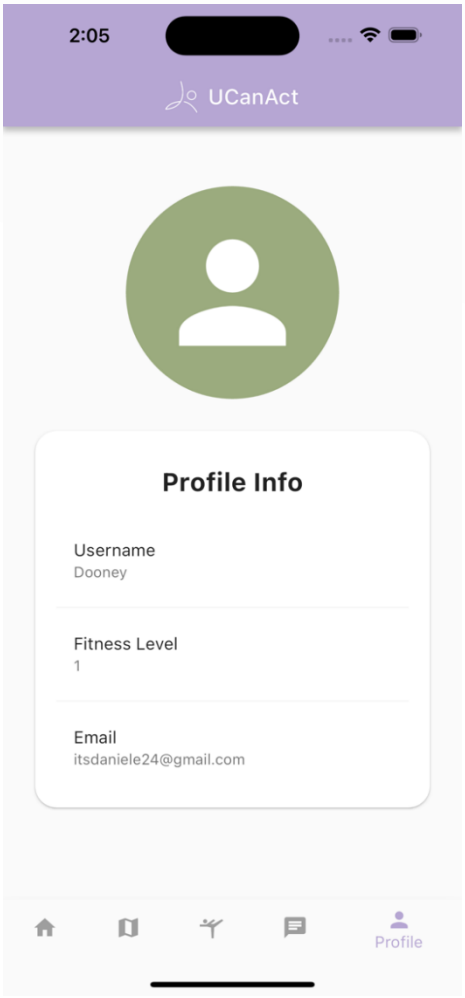

Figure 5. Profile

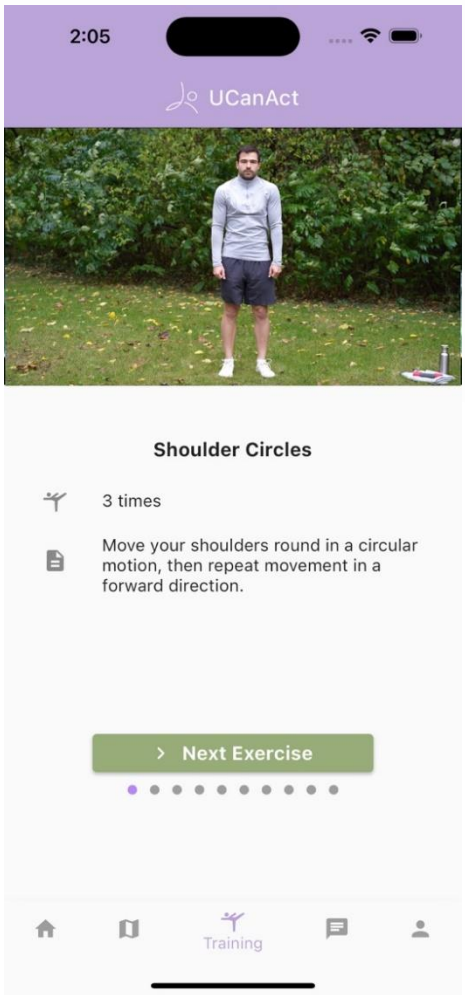

Figure 6. Exercise in training programme

The questionnaire is resubmitted to the user with weekly or bi-weekly cadence, to adapt the training programme to the potential modification in fitness level and/or frailty condition, and to update the training programme to maintain motivation in any case. The App also shows motivational and informative pop-up messages.

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In addition, as planned in the proposal, the UcanACT App implements a map, where the PUGS available for CPPA practice are indicated, and a chat, available to UcanACT users.

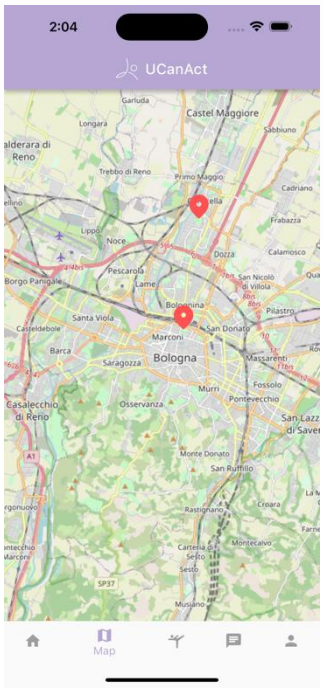

Figure 7. Map

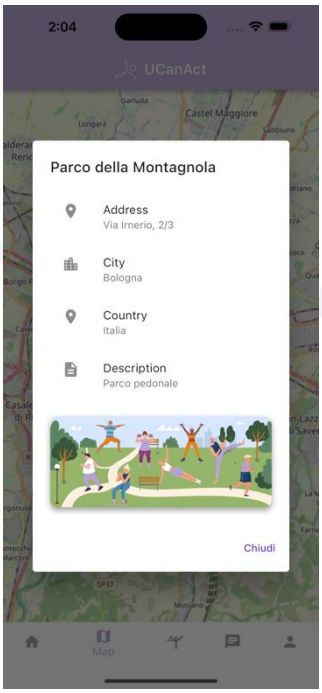

Figure 8. Pug identified on map

Figure 9. Chat

3.2 UcanACT App download

The first version of the UcanACT App, available for internal use, can be downloaded via the following **link**.

The App will be further developed and improved during the next phases of the UcanACT project. First of all, it will be available in the three languages of the project (i.e., English, Italian and German) to improve usability by the users participating in the Pilot CPPA actions within the three project pilot territories. Language will be based on the user's system and App language setting.

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Further improvement will be implemented based on the i) feedback from beta-testing by UcanACT partners during training, ii) feedback from users participating in the first round of Pilot CPPA action, and iii) results from the evaluation phase after the first Pilot round, to be finally validated in the second round of Pilot CPPA action.

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