UX lab & UX class

Observation labs for supporting of (web) user experience and learning

Institute of Informatics and Software Engineering
Slovak University of Technology in Bratislava, Slovakia
Motto

We find important to not only listen to what users did, but observe what they actually do.
User experience laboratory

- University science park of Slovak University of Technology in Bratislava

- Comprehensive observation of users working with technology
  - PC, smartphones, tables
  - Web pages, web applications
  - Watching multimedia, movies

- Focus on dynamic web applications

- Various domains – e.g. support of learning
  - Integration of UX with learning systems
Všetky reťazce dĺžky \( N \), ktoré majú najviac \( i \) bitov \( i \). Otvor / zatvor

Našou úlohou je načítať číslo \( i \) zo vstupu a vypísať \( i \)-ty prvok usporiadaného množiny, v ktorej sú \( N \)-bitové reťazce, ktoré majú najviac \( i \) bitov zápisu \( i \). Na štandardnom vstupe môžu byť viacero trojic čísel \( N \), \( i \), a \( S \), pre každú z nich vypíšte postupne na štandardný výstup jeden riadok reprezentujúci \( i \)-ty prvok usporiadaného množiny popísaný výššie.

Obmedzenia:
\( 1 \leq N \leq 31 \),
\( 1 \leq i \leq N \),
\( 1 \leq |S| \)

Ukážka vstupu:

```
3 3
31 31 2147483648
```

Uloha-3-3.java

```java
public static void main(String[] args) throws IOException {
    // sem napis svoje riesenie
}
```

Kompilácia ... OK

Vykonanie programu ... OK (70 ms)
UX group @ FIIT STU

- Interest group for discussion and exchange of experiences about technologies for observing user experience

- **UX Lab** – detailed observation lab (of everything)
  - PC, smartphones, tablets, projectors

- **UX Class** – observation of students learning
  - 20 PCs with sensors
UX Lab & UX class – Observation labs for supporting of (web) user experience and learning

**User eXperience @ FIIT STU**

**UX Lab**
- Intel RealSense
- 300 Hz Tobii eye-tracking
- ECG, GSR, FSR, °C
- EEG
- emotion detection

**UX Class**
- 20x RealSense
- 60 Hz Tobii eye-tracking
- emotion detection
UX Lab (1/2)

- Detailed observation of eye gaze 300Hz
  - Very high precision and sample rate, observing eye gaze on the level of reading individual letters
  - (first) fixation, duration of fixation, saccades, ...

- Observation of users in:
  - Software applications on PC, web
  - Mobile apps usage experience
  - Watching TV
  - Projector screens
UX Lab (2/2)

- Observing emotions on multiple levels:
  1. Sensors on the neuro-level (brain) (EEG)
  2. Sensors on the physiological level
     ECG, GSR, FSR, °C
  3. Visually, using software
     analysis of facial features
     from HD and depth camera
     streams

Happy, Sad, Angry, Surprised, Scared, Disgusted
UX Class

- Computer class with technology of future
  - Support of learning using personalized web-based educational systems

- 20x PC with sensors (eye-gaze, cameras, ...)  
  - Observing and adapting to the way how students work/use: keyboard, mouse, eye-gaze, emotions
Software infrastructure
Observation in dynamic web applications

Participant

Eye tracker

Defines areas of interest

Enriches data with AOIs

Gaze Monitor

Studies AOIs

Stores gaze tracking data

Stores gaze tracking data

Participant

Researcher

Web Browser

AOI Logger

Gaze Monitor

Gaze Admin

Gaze Visualizer

Gaze API

3rd-party Application

Retrieves gaze tracking data for personalization

Analyses gaze tracking data

Retrieves gaze tracking data for personalization

Defines areas of interest

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Specifying AOI (area-of-interest)
Specifying AOI (area-of-interest) cont.
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ux.fiit.stuba.sk