

Software Safety Exercise 2

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You will be given a specific safety topic. Your exercise assignment is as follows:

- 1) Research the topic on the web and/or the UTD library
- 2) Prepare a brief, introductory presentation, as described below
- 3) Give the presentation to the class, taking 10 minutes to do so

Presentation:

You should prepare a PowerPoint presentation containing the following slides:

Slide 1 – A title slide such as:



UT Dallas – Software Safety: Research, Practice and a Path Forward

Summer, 2024


<xxx> Safety

<replace with your name>


Slide 2 – An introduction to yourself, such as:

UT D **About Me**

My name is Sample Student

I'm from Hill and Dale College in Muskegon, Michigan → 

My college major is computer science

Here is my family → 

I'm the one in the middle

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Slide 3 – A summary of safety issues for your topic, such as:

UTD **About Child Safety**

There are many potential hazards for children

- Batteries
- Bicycles
- Water/Boating
- Booster Seats
- Burns and Scalds
- Car Seats
- Carbon Monoxide
- Choking and Strangulation
- Driveway Safety
- Falls Apply Falls filter
- Fire Apply Fire filter
- Fireworks
- Getting Ready to Drive
- Guns
- Halloween
- Heatstroke
- Holidays
- In and Around Cars
- Laundry Packets
- Cars
- Toys
- Furniture tip overs
- And many, many more

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Slide 4 – Observations about the role of software in safety for your topic, such as:

UTD **Software in Child Safety**

Software may be found in many child safety devices, such as:

- Baby monitors
- Carbon monoxide detectors
- Smoke detectors
- Car rear view mirrors
- Sports equipment (e.g., concussion monitors)
- Cars
- Toys
- Televisions

Although software seldom directly controls safety critical functions, it is often used in warnings and must be designed to work correctly, even in the event of device malfunction.

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Slide 5 – Specific Software Issues in your safety topic:

UTD **Some Specific Software Issues Encountered in Child Safety Devices**

- **Proper response to power failures**
- **Protection from intrusion by network hackers**
 - For devices connected to the internet such as baby monitors
- **Detection of hardware damage (for example, child spills juice onto an electronic monitor in his or her car seat)**
- **Operator error should be very uncommon**
 - Devices should be very easy to use and hard to misuse (because the users are typically not very knowledgeable about computers)
- **Do it right the first time**
 - Parents are unlikely to update software in their baby’s toys, monitors, etc.

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Last slide:

UTD **Any Questions?**



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