Please provide the following information to be shared with on capstone information exchange platform:

1. **Project number**: 65

2. **Project title (as will appear on the poster)**: Per-Role Device Management via NFC

3. **Team members**: Andrew Marfitsin, Himateja Madala, Akshaykumar Patil, Murali Venkata Krishna Gunti

4. **Adviser(s) name(s)**: Predrag Spasojevic

5. **Up to 5 keywords that will help to classify the project scope**:
   1. NFC
   2. Android
   3. Mobile Device Management
   4. 3D Printing/ Modeling

6. **Project abstract (up to 250 words) to be shared with judges**:

   **Project objective**:
   Create a simple solution for auto dealerships to lock-down functionality of work devices, while being able to reallocate devices to different employee roles depending on who is on shift.

   **Problem**:
   Software solutions for different dealership employee roles are typically in independent packages. This introduces the following problems:
   1. Limiting user access to only the relevant task,
   2. Provisioning task-specific devices, which causes:
   3. More devices needed to be on hand than may be necessary at any one time.
   Typically, devices will be role-specific in configuration to avoid the difficulties of securely toggling between the utilities used for different employee roles, or will require costly mobile device management solutions which introduce difficulties with user provisioning, and sign-on. Thus, the device pool cannot be shared between occupations.
Solution:
Build an application that displays only certain utility screens based on a physical accessory affixed directly to the device.
Develop Android native app with several built-in Activities for each work role, that runs in "kiosk mode", preventing access to other areas of the OS
3D print a snap-on accessory, attachable to the device, that houses an NFC tag. Each accessory will feature an easily distinguishable color unique to the work role.
Write NFC tags with a unique string that, when read, determines the Android Intent to launch into the specific Activity.