**DFU FLOW**

**Below are the steps to follow to do DFU OTA in nRF52832 for Inspire Fitness.**

Step :- 1

Install nrfutil.exe,nrfjprog.exe and mergehex.exe utilities.

nRF\_SDK(minimum version 12)

SEGGER Jlink.

Step :- 2

Generate private keys. Type below command line.

nrfutil.exe keys generate private.key

Generate your public key based on your private key.

nrfutil keys display --key pk --format code private.key --out\_file public\_key.c

Step :- 3

Generate DFU.zip packet using below command.

nrfutil pkg generate --hw-version 52 --application-version 1 --application ble\_app\_template\_pca10040\_s132.hex --sd-req 0xB7 --key-file private.key app\_dfu\_package.zip

Copy .zip file in your mobile.

Note: sd-req = 0xB7 is for SDK 15.3.0

Sd-req = 0x87 for SDK 12.3.0

Note: Find the softdevice code number by typing nrfutil pkg generate --help

**Below are the steps to combine Application,Boot-loader and Soft-device.**

**Step :- 1**

**Generate boot-loader settings as per our Application using below command.**

nrfutil settings generate --family NRF52 --application ble\_app\_template\_pca10040\_s132.hex --application-version 3 --bootloader-version 2 --bl-settings-version 1 settings\_52832.hex

**Step :- 2**

**Combine soft-device.hex and application.hex using below command.**

mergehex.exe -m s132\_nrf52\_6.1.1\_softdevice.hex ble\_app\_template\_pca10040\_s132.hex -o sd\_and\_app\_52832.hex

**Step :- 3**

**Combine soft-device.hex,application.hex and bootloader.hex files using below command.**

mergehex.exe -m sd\_and\_app\_52832.hex secure\_bootloader\_ble\_s132\_pca10040.hex -o sd\_and\_app\_and\_boot\_52832.hex

**Step :- 4**

**Combine soft-device.hex,application.hex and bootloader.hex and boot-loader setting.hex files using below command**.

mergehex.exe -m sd\_and\_app\_and\_boot\_52832.hex settings\_52832.hex -o sd\_app\_boot\_setting\_complete\_52832.hex