Round-Robbin Scheduler

Task Control Blocks   NMI
↓   ↓

TCB 1 ADR: State   RUN   Scan TCB states and find RUN state TCB.
                            R0-R15   Change RUN to WAIT
                            FLAGS   Save the NMI saved return info into the TCB
                            SP   Go to next TCB (round robin style)
                            PC

TCB 2 ADR: State   WAIT   Overwrite the saved stack into NMI stack.
                            R0-R15   Change state to RUN
                            FLAGS   NMI return.
                            SP
                            PC

TCB 3 ADR: State   WAIT
                            R0-R15
                            FLAGS
                            SP
                            PC
                                                                Special Case

TCB 3 ADR: State   PRI   If PRI found, just NMI return.
                            R0-R15
                            FLAGS   PRI state must be reset before other tasks run.
                            SP   Scheduler will not schedule until state = RUN
                            PC   So, the App must set state to release scheduler to other apps

                                                        When State is RUN, scheduler will acts as before,
                                                        Saving the former state registers and setting status to WAIT.