# PG – DESD

# Module – Embedded C Programming

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# Infinite loop

- If loop condition is always true, program never terminates.

```
while(1) {
        ...
}

for( ; ; ) {
        ...
}

do {
        ...
} while(1);
```

# break/continue

- break statement
  - Used to early exit from loop, or to exit an infinite loop
  - Takes control out of current loop and continues execution of statements after the loop.
  - Statements after break are skipped.

- continue statement
  - Used to continue next iteration of the loop.
  - Statements after continue are skipped (for current iteration).

- break is used with loop/switch case.
- continue used with only loop.

- In case of nested loops, break/continue affects current loop only (not outer).

# goto statement

- Jumps to statement label, must be within same function as the goto.
  - Statement label is an identifier followed by a colon (:)
  - Unstructured control statement
  - Used rarely (less readable)
  - Advised to use only for forward jump
- Best use is to exit from deeply nested loops.

- Syntax:

```
goto label_name;
..
..
label_name: C-statements
```

# do-while loop

- Used to repeat a statement (or block) while an expression is true (not zero).
- Syntax:

```
do {
        statement1;
        statement2;
} while(condition);
```

- do-while is exit control loop.
- while & for are entry control loops.
- do-while is executed at least once.

# Thank you!

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