for (int i = 1; i <= N; i++) { // body of loop }

// 1. Print numbers 1 to 5 for (int i = 1; i <= 5; i++) { printf("%d ", i); }

// 2. Print first 10 even numbers for (int i = 2; i <= 20; i += 2) { printf("%d ", i); }

// 3. Sum of first 5 numbers int sum = 0; for (int i = 1; i <= 5; i++) { sum += i; } printf("Sum = %d", sum);

// 4. Print squares of 1–5 for (int i = 1; i <= 5; i++) { printf("%d ", i \* i); }

// 5. Countdown 10 to 1 for (int i = 10; i >= 1; i--) { printf("%d ", i); }

while (input != sentinel) { // process input scanf("%d", &input); }

// 1. Stop when user enters -1 int num; scanf("%d", &num); while (num != -1) { printf("You entered: %d\n", num); scanf("%d", &num); }

// 2. Read positive numbers until 0 scanf("%d", &num); while (num != 0) { printf("Number: %d\n", num); scanf("%d", &num); }

// 3. Sum numbers until -999 int sum = 0; scanf("%d", &num); while (num != -999) { sum += num; scanf("%d", &num); } printf("Sum = %d", sum);

// 4. Find max until -1 int max = -9999; scanf("%d", &num); while (num != -1) { if (num > max) max = num; scanf("%d", &num); } printf("Max = %d", max);

// 5. Count valid inputs until 999 int count = 0; scanf("%d", &num); while (num != 999) { count++; scanf("%d", &num); } printf("Count = %d", count); for (initialization; condition; update) { // body } while (condition) { // body }

// 1. Print numbers 1–5 int i = 1; while (i <= 5) { printf("%d ", i); i++; }

// 2. Sum until number reaches 10 int sum = 0, n = 1; while (n <= 10) { sum += n; n++; } printf("Sum = %d", sum);

// 3. Print powers of 2 less than 100 int p = 1; while (p < 100) { printf("%d ", p); p \*= 2; }

// 4. Countdown 5–1 int x = 5; while (x >= 1) { printf("%d ", x); x--; }

// 5. Print digits of a number int num = 1234; while (num > 0) { printf("%d ", num % 10); num /= 10;

} do { // body } while (condition);

// 1. Print numbers 1–5 int i = 1; do { printf("%d ", i); i++; } while (i <= 5);

// 2. Keep asking password until correct int password; do { printf("Enter password: "); scanf("%d", &password); } while (password != 1234);

// 3. Sum until user enters 0 int num, sum = 0; do { scanf("%d", &num); sum += num; } while (num != 0); printf("Sum = %d", sum);

// 4. Print menu until exit int choice; do { printf("1. Start\n2. Exit\n"); scanf("%d", &choice); } while (choice != 2);

// 5. Roll dice until 6 int dice; do { dice = rand() % 6 + 1; printf("Rolled: %d\n", dice); } while (dice != 6);