```
and types
                                                                                               output
                                                                                              parameter
                                                                                                type
                                                                                                    double product = 0;
                                                                                                      if (flag) {
                                                                                                         product = 2.0 * var;
                                                                                          body of the
                                                                                                       } else {
                                                                                            function
                                                                                                         product = var;
                                                                                                       return product;
                     // This program prints a pattern of stars using two functions
                     #include <stdio.h>
                     // Function prototypes
                     void printPattern(int numOfRows);
                     void printStars(int numOfStars);
                     int main(void) {
                     printf("Enter the number of lines in the pattern: ");
                                                                                  1 return or output
                                                                                                        void printStars(int numOfStars) {
                     scanf("%d", &lines);
                     printPattern(lines);
                                                                                      parameter type
                                                                                                           for (int star = 1; star <= num0fStars; star++) {</pre>
                                                                                   (2) function name
                     void printStars(int numOfStars) {
                     for (int star = 1; star <= numOfStars; star++) {</pre>
                                                                                                             printf("%c", '*');
                      printf("%c", '*');
                                                                                  3 type of input
                     printf("\n"); // print an endline to start a new line
                                                                                      paramter
                     void printPattern(int numOfRows) {
                     for (int row = 1; row <= numOfRows; row++) {
                                                                                                           printf("\n"); // to start a newline
                                                                                  (4) input paramter
                      printStars(row);
                                                                                  body of the function
                                                                                      function
                                                                                                         void printPattern(int numOfRows) {
                                                                                                            for (int row = 1; row <= numOfRows; row++) {</pre>
                                                                                   Call printStars ——— printStars (row);
                                                                                                               Pass row value to numOfStars
                                                                                                               in printStars function
                                                                                                        Function Prototype
                                                                                                        void printStars(int numOfStars);
                                                                                                        Also a Function Prototype
                                                                                                                                     not required
// Function prototype
                                                                                                        void printStars(int);
<return type> functionName(<type>);
int main(void) {
 // Call function
  <type> variableName = functionName(<variable to pass>);
  return 0;
// Function implementation
<return type> functionName(<type> <input parameter name>) {
return <variable with same type as <return type>>;
                                                                                    // This program prints a pattern of stars using 2 functions
                                                                                    #include <stdio.h>
                                                                                    // Function prototypes: Headers of functions
                                                                                    void printPattern(int numOfRows);
                                                      every program starts
                                                      with executing main
                                                                                    void printStars(int numOfStars);
                                                     printPattern is
                                                                                    int main(void) {
                                                      called
                                                                                       int lines;
                                                      value of lines is
                                                                                       printf("Enter the number of lines in the pattern: ");
                                                      passed to numOfRows
                                                                                       scanf("%d", &lines);
                                                                                    (2) printPattern(lines);
                                                 4) printStars is called
                                                                                       return 0;
                                                      value of row is passed
                                                      to numOfStars
                                                                                 3 void printPattern(int numOfRows) {
                                                      body of printStars
                                                                                       for (int row = 1; row <= num0fRows; row++) {</pre>
                                                      is executed
                                                                                     (4) printStars(row);
                                                      returns to where
                                                 printStars was
                                                      called
                                                  4 to 7 repeats depending
                                                                                 (5) void printStars(int numOfStars) {
                                                  on numOfRows
                                                                                       for (int star = 1; star <= num0fStars; star++) {</pre>
                                                      returns to where
                                                                                         printf("%c", '*');
                                                  (8) printPattern was
                                                      called
                                                                                       printf("\n"); // to start a newline
                              #include <stdio.h>
         Execution starts with
          main function
                              int factorial(int n);
```

int main(void)

return 0;

int number = 4;

int factorial(int n) {

fact = fact * i;

int fact = 1;

return fact;

int result = factorial(number);

number, result);

printf("Factorial of %d: %d,

for (int i = 1; i <= n; i++) {

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Call factorial, with

number, which is 4,

got assigned to new

return value of fact,

factorial(number)

which is 24 back to

the caller function,

is evaluated as 24

result stores 24

which is main

variable named n

argument 4

The value of

input/s → functionName → output

return or

double multiplyTwo(int var, bool flag) {

input parameters identifiers

function name