Writing to a File in Maple R6

Maple has fprintf statements which work very similar to those of C. This worksheet illustrates opening a file (potentially one whose name is computed in a program) and writing some simple text and numbers to the file.

These first 3 variables specify the location and name of the file being saved.

```
> DIR_LOCN :=`/tmp`;
```

$$DIR_LOCN := /tmp$$

```
> NUM:= 25;
```

$$NUM := 25$$

```
> group_suffix := `grp`;Here || is the concatenation operator. `` is
  the empty string.
```

$$group_suffix := grp$$

Here || is the string concatenation operator and ‘‘ is the empty string.

```
> group_output_file_path := ``|| DIR_LOCN  || `/` || nm || NUM ||
  `.`  || group_suffix;
```

$$group_output_file_path := /tmp/nm25.grp$$

The format specifications for integers, floats, and algebraic expressions are illustrated here. Many more exist. Also \t is a tab and \n a newline.

```
> fd := fopen(group_output_file_path,WRITE);
  for i from 1 to 3 do
       fprintf(fd,`An integer: %d\n`,i);
       fprintf(fd,`\tA float: %g\n`,evalf(log(i+1)));
       fprintf(fd,`\t\tAlgebra: %a\n`,expand((x+y)^i));
  od:
  fclose(fd);
```

$$fd := 1$$

Especially when debugging it is useful to have your output go to the current worksheet instead of a file. Setting fd to default does this.

```
> fd := default;
  for i from 1 to 3 do
       fprintf(fd,`An integer: %d\n`,i);
       fprintf(fd,`\tA Float: %g\n`,evalf(log(i+1)));
       fprintf(fd,`\t\tAlgebra: %a\n`,expand((x+y)^i));
  od:
  #fclose(fd);
```

$$fd := default$$

```
An integer: 1
 A Float: .693147
  Algebra: x+y
An integer: 2
 A Float: 1.098612
  Algebra: x^2+2*x*y+y^2
An integer: 3
 A Float: 1.386294
  Algebra: x^3+3*x^2*y+3*x*y^2+y^3
>
```