

# MAIN\_FILE

## JAVAFOIL

```
writeActionsFile()  
in: prop_path, alpha,  
coord_path, mach_nr, air_dens,  
reynolds_nr, xTrTop, xTrBottom,  
i  
out: actionsfile, polarfile  
-----  
run()  
in: driver, folder,  
actionsfile, polarfile
```

## UTILITY\_FUNCTIONS

%% Pfad- und File-Handling

```
create_folder()  
in: name, path  
-----  
get_path()  
in: fname  
out: driver, folder  
-----  
save_files()  
in: struct, n, v_flight,  
dtheta_in, dtheta_out,  
prop_path  
-----  
deleteFiles()  
in: delete, path
```

%% Berechnung von Parameter

```
set_alpha()  
in: theta, vx, vt, va, vr  
out: alpha  
-----  
set_rho_nue_c()  
in: p_air, temp  
out: rho, nue, c  
-----  
set_r_theta_chord_coord()  
in: data, path, fname,  
r_hub, dr, elements  
out: r, theta, chord, coord  
-----  
set_dep_par()  
in: n, el, r_hub, dr,  
v Flug, r, chord, nue, c,  
rho, cw  
out: w, r_max, vx, vt, rey,  
mach, fw
```

%% Konvergenz

```
check_convergence()  
in: alpha1, alpha2, v0_1,  
v0_2, va, vr, cl, cd, beta,  
r, theta, vx, vt, count  
out: converted,  
convergence, v0_1, v0_2,  
alpha
```

%% Winkel-Funktion

```
poly_function_theta()  
in: r, theta  
out: f  
-----  
set_poly_angle()  
in: r, f, df, db  
out: theta2
```

%% Definition von va und vr

```
combfun()  
in: chord, nb, r, R,  
r_hub, dr, vx_, vt_, cl,  
cd, va, vr  
out: funct  
-----  
set_variables()  
in: chord, nb, r, R,  
r_hub, dr, vx_, vt_, cl,  
cd, v0  
out: V  
-----  
fun_va_vr()  
in: v  
out: funct
```

%% Schub und Drehmoment

```
momentum()  
in: vx_, vt_, va, vr, nb,  
R, r, r_hub, dr, rho  
out: dTM, dQM  
-----  
blade()  
in: vx_, vt_, va, vr, cl,  
cd, chord, r, dr, nb, rho  
out: dTB, dQB
```

%% Structure-Handling

```
angle_num2str()  
in: array1  
out: array2  
-----  
init_fields()  
in: name, array1, array2=[]  
out: fieldnames  
-----  
fill_elemstruct()  
in: var, struct, data, r, rey, mach, dt, dq  
out: var  
-----  
fill_structure()  
in: struct, values=[], struct_array=[]  
out: var
```