## **MVàP Cheat Sheet**

## Résumé des instructions

| Code                                      | Pile   | sp   | рс   | Condition                         |
|---|--|------|--|-----------------------------------|
| PUSHI n                                   | P[sp] := n   | sp+1 | pc+2   | n est une<br>valeur<br>entière    |
| ADD (SUB, MUL, DIV)                       | P[sp-2]:=P[sp-2]<br>+ P[sp-1]                      | sp-1 | pc+1   | 2 entiers<br>en sommet<br>de pile |
| INF (INFEQ,<br>SUP, SUPEQ,<br>EQUAL, NEQ) | P[sp-2]:= 1 si<br>P[sp-2] <<br>P[sp-1],<br>0 sinon | sp-1 | pc+1   | 2 entiers<br>en sommet<br>de pile |
| PUSHG n<br>(PUSHL n)                      | P[sp] := P[gp+n]<br>(P[sp] :=<br>P[fp+n])          | sp+1 | pc+2   | n entier<br>t.q. gp+n <<br>sp     |
| STOREG n<br>(STOREL n)                    | P[gp+n] := P[sp-<br>1]<br>(P[fp+n] := P[sp-<br>1]) | sp-1 | pc+2   | n entier<br>t.q. gp+n <<br>sp     |
| JUMP label                                |  | sp   | instr(label)                                   |                                   |
| JUMPF label                               |  | sp-1 | pc+2 si<br>P[sp−1]≠0,<br>instr(label)<br>sinon |                                   |
|   |  |      |  | label<br>correspond               |

| CALL label |                    | •••  | instr(label) | à<br>une<br>adresse<br>dans le        |
|------------|--------------------|------|--------------|---------------------------------------|
|            |                    |      |              | code                                  |
| RETURN     |                    |      |              |                                       |
| POP        |                    | sp-1 | pc+1         | sp > 1                                |
| HALT       |                    |      |              |                                       |
| READ       | P[sp] := entier lu | sp+1 | pc+1         | un entier<br>sur l'entrée<br>standard |
| WRITE      |                    | sp   | pc+1         |                                       |

## Instructions supplémentaires

| Code     | Pile                            | sp   | рс   | Condition   |
|----------|---------------------------------|------|------|---|
| PADD     | P[sp-2] := P[sp-2]<br>+ P[sp-1] | sp-1 | pc+1 | adresse et<br>entier en<br>sommet<br>pile             |
| PUSHR n  | P[sp-1] :=<br>P[P[sp-1] + n]    | sp   | pc+2 | n entier,<br>adresse<br>en<br>sommet<br>pile          |
| STORER n | P[P[sp-2] + n] :=<br>P[sp-1]    | sp-2 | pc+2 | n entier,<br>adresse<br>en 2 <sup>e</sup><br>position |

|   |  |      |                           | sur la pile                                   |
|---|--|------|---------------------------|---|
| FREE n                                    |  | sp-n | pc+2                      | sp > n  |
| ALLOC n                                   | P[x] := 0  pour sp < $x < sp+n$                                  | sp+n | pc+2                      |   |
| JUMPI label                               |  | sp-1 | instr(label)<br>+ P[sp–1] | entier en<br>sommet<br>de pile                |
| DUP                                       | P[sp]:=P[sp-1]   | sp+1 | pc+1                      |   |
| PUSHF f                                   | P[sp],P[sp+1] := f   | sp+2 | pc+3                      | f est une<br>valeur en<br>flottant            |
| FADD (FSUB,<br>FMUL, FDIV)                | P[sp-2],P[sp-1]:=<br>(P[sp-4],P[sp-3])<br>+<br>(P[sp-2],P[sp-1]) | sp-2 | pc+1                      | 2 flottants<br>en<br>sommet<br>de pile        |
| FINF (FINFEQ, FSUP, FSUPEQ, FEQUAL, FNEQ) | P[sp-4]:= 1 si<br>(P[sp-4],P[sp-3])                              | sp-3 | pc+1                      | 2 flottants<br>en<br>sommet<br>de pile        |
| READF                                     | P[sp],P[sp+1] := f   | sp+2 | pc+1                      | un<br>flottant<br>sur<br>l'entrée<br>standard |
| WRITEF                                    |  | sp   | pc+1                      |   |
|   |  |      |                           |   |