$e ::= \ldots \mid \underline{cmd}\,(m)$

$\tau ::= \ldots \mid \underline{cmd}\,(\tau)$

$$\frac{\Gamma \vdash_\Sigma m \sim \tau}{\Gamma \vdash_\Sigma \underline{cmd}(m) : \underline{cmd}\,(\tau)} \qquad \frac{}{\underline{cmd}(m)\ \mathrm{val}_\Sigma}$$

$m ::= \underline{set}\,[a]\,(e) \mid \underline{get}\,[a] \mid \underline{ret}\,(e) \mid \underline{bnd}\,*(e, x.m)$

$m ::= a := e \mid @a \mid \underline{ret}\ e \quad \underline{bnd}\ x \leftarrow e; m$

$$\frac{e \mapsto e'}{\underline{set}\,[a]\,(e) \mid\mid \mu \otimes a \hookrightarrow e_2 \Longrightarrow_\Sigma \underline{set}\,[a]\,(e') \mid\mid \mu \otimes a \hookrightarrow e_2}$$

$$\frac{e\ \mathrm{val}}{\underline{set}\,[a]\,(e) \mid\mid \mu \otimes a \hookrightarrow e_2 \Longrightarrow_\Sigma \underline{ret}\,(e) \mid\mid \mu \otimes a \hookrightarrow e}$$

$$\underline{get}\,[a] \mid\mid \mu \otimes a \hookrightarrow e_2 \Longrightarrow_\Sigma \underline{ret}\,(e_2) \mid\mid \mu \otimes a \hookrightarrow e_2$$

$$\frac{e \mapsto e'}{\underline{ret}\,(e) \mid\mid \mu \Longrightarrow_\Sigma \underline{ret}(e') \mid\mid \mu} \qquad \frac{e\ \mathrm{val}_\Sigma}{\underline{ret}\,(e) \mid\mid \mu\ \mathrm{final}_\Sigma}$$

$$\frac{\Gamma \vdash_\Sigma e : \tau}{\Gamma \vdash_\Sigma \underline{ret}\,(e) \sim \tau} \qquad \frac{a \sim \tau \in \Sigma}{\Gamma \vdash_\Sigma \underline{get}\,[a] \sim \tau} \qquad \frac{a \sim \tau \in \Sigma \quad \Gamma \vdash e : \tau}{\Gamma \vdash_\Sigma \underline{set}\,[a](e)}$$

$$\frac{\Gamma \vdash_\Sigma e : \underline{cmd}(\tau') \qquad \Gamma, x : \tau' \vdash_\Sigma m \sim \tau}{\Gamma \vdash_\Sigma \underline{bnd}\,(e, x.m) \sim \tau}$$

$$\frac{e \mapsto_\Sigma e'}{\underline{bnd}\,(e, x.m) \mid\mid \mu \Longrightarrow_\Sigma}$$

$$\frac{m \mid\mid \mu \Longrightarrow_\Sigma m' \mid\mid \mu'}{\underline{bnd}\,(\underline{cmd}(m), x.m') \mid\mid \mu \Longrightarrow_\Sigma}$$

$$\frac{e\ \mathrm{val}_\Sigma}{\underline{bnd}\,(\underline{cmd}\,(\underline{ret}\,(e)), x.m') \mid\mid \mu \Longrightarrow_\Sigma [e/x]m' \mid\mid \mu}$$