This is a grammar for Es. There are some changes from the current version of Es to this grammar. I am deprecating the “on” token before action names though Quorum has it.

<start line> → <using> | <action> | <class> | <identline> | <end> | <return> | <asm block> | <repeat> | <if>

<using> → **using** <path> . <using path>

<using path> → <path> . <using path> | ε

<path> → *ident*

<action> → **action** <asm> ~~<on>~~ <action name> <decl expr> <return expr>

<asm> → **asm**

~~<on> →~~ **~~on~~**

<action name> → *actionname*

<decl expr> → **(** <param list one> **)**

<param list one> → <type> <name> <param list more> | ε

<param list more> → **,** <type> <name> | ε

<type> → *ident* <template>

<name> → *ident*

<return expr> → **returns** <type> | ε

<end> → **end**

<return> → **return** <type>

<asm block> → *asmblock*

<template> → **<** <template list one> **>** |ε

<template list one> → <type> <template list mult>

<template list mult> → , <type> | ε

<identline> → <expr>

<expr> → <action call> | <ident binary op> | <parens> | ε

<ident binary op> → *ident* <binary op> <expr>

<binary op> → **+** | **-** | **\*** | **/** | **!=** | **<=** | **>=** | **<** | **>** | **:**

<parens> → **(** <expr> **)**

<action call> → <action name> <action args>

<action args> → **(** <action args one> **)**

<action args one> → <expr> <action args mult>

<action args mult> → **,** <expr>