SDT 5.1

mercoledì 29 dicembre 2021 17:32

<prog> :={slotlist.next = newlabel()} <slotlist> {emitLabel(slotlist.next)} EOF

<slotlist> :={stat.next = newlabel()} <stat> {slotlistp.next = slotlist.next} {emitLabel(stat.next)} <slotlistp>

<slotlistp> := ; {stat.next = newLabel()} <stat> {slotlistp.next = father_slotlistp_next} {emitLabel(stat.next)} <slotlistp> | eps

<stat> := assign <expr> to <idlist> {emit(GOto Label(father_stat_next))}

| print (<exprlist> {emit(invokestatic(1))}) {emit(GOto Label(father_stat_next))}

| read ({emit(invokestatic(0))} <idlist> {emit(GOto Label(father_stat_next))}

| if ({bexpr.true = newLabel(); bexpr.false = newLabel(); stat.next = newLabel()} {emitLabel(stat.next)} <bexpr>) {emitLabel(bexpr.true)} <stat> {emitLabel(bexpr.false)} <statTwo>

| while({bexpr.true = newLabel(); bexpr.false = father_stat_next; stat.next = newLabel()} {emitLabel(stat.next)} <bexpr>) {emitLabel(bexpr.true)} <stat>

| { {statlist.next = father_stat_next} <statlist> }

<idlistp> := , ID {emit(istore addr(id))} <idlistp> | eps

<idlist> := ID {emit(istore addr(id))} <idlistp>

<statTwo> := ELSE {stat.next = father_statTwo_next} <stat> END | END

<bexpr> := RELOP <expr> <expr> {emit(if_relop Label(bexpr.true); emit(GOto Label(bexpr.false))}

<expr> := + (<exprlist>) {emit(iadd)}

| * (<exprlist>) {emit(imul)}

| - <expr> <expr> {emit(isub)}

| / <expr> <expr> {emit(idiv)}

| NUM {emit(ldc expr.number)}

| ID {emit(iload addr(id))}

<exprlist> := <expr> <exprlist>

<exprlistp> := , <expr> <exprlist> | eps