

```
Switch E {
    Case V1: others;
}
```

```
Clause -> case const : N1 M S N2
{
    Clause.tempList = newList(nextQuad)
    Clause.falseList = newList(nextQuad)
    emit(if __ != const.addr goto __ else goto M.quad)
    Clause.nextList = merge(N.nextList, S.nextList);
}
```

```
Clauses -> clause; M clauses1
{
    backpatch(clause.falseList, M.quad)
    Clauses.tempList = merge(clause.tempList, clauses1.tempList)
    Clauses.falseList = clauses1.falseList
    Clauses.nextList = merge(clause.nextList, clauses1.nextList)
    if(clause.defaultAddr)
        Clauses.defaultAddr = clause.defaultAddr
    Else
        Clauses.defaultAddr = clauses1.defaultAddr
}
```

//Assumption: semantic analysis makes sure at most one default case in the switch

```
S -> switch E {clauses}
{
    backpatch(clauses.tempList, E.addr)
    if(clauses.defaultAddr)
        backpatch(clauses.falseList, clauses.defaultAddr)
        S.nextList = clauses.nextList
    Else
        S.nextList = merge(clauses.falseList, clauses.nextList)
}
```

```
S -> break
{
    S.nextList = newList(nextQuad)
    emit(goto __)
}
```

```
S -> S1; M S2
{
    backpatch(S1.nextList, M.quad)
```

```

        S.nextList = S2.nextList
    }

Clause -> default : M S N
{
    Clause.defaultAddr = M.quad
    Clause.nextList = merge(S.nextList, N.nextList)
}

Clauses -> clause
{
    Clauses.nextList = clause.nextList
    Clauses.falseList = clause.falseList
    Clauses.defaultAddr = clause.defaultAddr
}

S -> others {}

```