

Preklad binárnych výrazov

J M M

Konštrukcia prekladačov

Preklad aritmetických binárných výrazov

Vyraz:	<i>Vyraz PLUS Vyraz</i>	{ \$\$=binAritVyraz(\$1,\$3,"iadd","dadd"); }
	<i>Vyraz MINUS Vyraz</i>	{ \$\$=binAritVyraz(\$1,\$3,"isub","dsub"); }
	<i>Vyraz KRAT Vyraz</i>	{ \$\$=binAritVyraz(\$1,\$3,"imul","dmul"); }
	<i>Vyraz DEL Vyraz</i>	{ \$\$=binAritVyraz(\$1,\$3,"idiv","ddiv"); }

```
ATRV binAritVyraz(ATRV v1, ATRV v2, char *int_op, char *dbl_op) {
```

```
    ATRV lv;
```

```
    lv.kod = (char *) malloc(10 + strlen(v1.kod) + strlen(v2.kod));
```

```
    if (v1.sig[0] == 'I' && v2.sig[0] == 'I') {
```

```
        lv.sig = v1.sig;
```

```
        sprintf(lv.kod, "%s%s\t%s\n", v1.kod, v2.kod, int_op);
```

```
    } else if (v1.sig[0] == 'D' && v2.sig[0] == 'D') {
```

```
        lv.sig = v1.sig;
```

```
        sprintf(lv.kod, "%s%s\t%s\n", v1.kod, v2.kod, dbl_op);
```

```
    } else { yyerror("Nekompatibilne vyrazy pre aritmeticky operator"); ... }
```

```
    free(v1.kod); free(v2.kod);
```

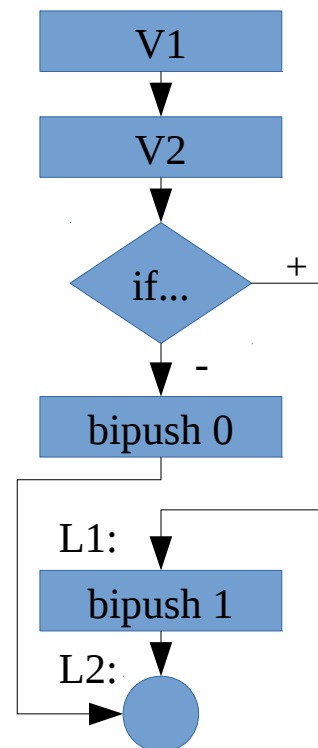
```
    return lv;
```

```
}
```

Preklad relačných binárných výrazov

Vyraz:	Vyraz <i>LT</i> Vyraz	{ \$\$ = binRelVyraz(\$1, \$3, "if_icmplt", "dcmpl\n\tiflt", NULL); }
	Vyraz <i>LE</i> Vyraz	{ \$\$ = binRelVyraz(\$1, \$3, "if_icmple", "dcmpl\n\tifle", NULL); }
	Vyraz <i>GT</i> Vyraz	{ \$\$ = binRelVyraz(\$1, \$3, "if_icmpgt", "dcmpl\n\tifgt", NULL); }
	Vyraz <i>GE</i> Vyraz	{ \$\$ = binRelVyraz(\$1, \$3, "if_icmpge", "dcmpl\n\tifge", NULL); }
	Vyraz <i>EQ</i> Vyraz	{ \$\$ = binRelVyraz(\$1, \$3, "if_icmpeq", "dcmpl\n\tifeq", "if_acmpeq"); }
	Vyraz <i>NE</i> Vyraz	{ \$\$ = binRelVyraz(\$1, \$3, "if_icmpne", "dcmpl\n\tifne", "if_acmpne"); }

```
ATRV binRelVyraz(ATRV v1, ATRV v2, char *int_op, char *dbl_op, char *obj_op)
{ ATRV lv; int n1 = navestie++, n2 = navestie++; lv.kod = (char *) malloc(...); lv.sig = "Z";
  if (v1.sig[0] == 'I' && v2.sig[0] == 'I') {
    lv.kod = v1.kod
      v2.kod
      int_op Ln1
      bipush 0
      goto Ln2
    Ln1:
      bipush 1
    Ln2:
    ...
  }
```



Preklad logických binárných výrazov

Vyraz : Vyraz OR Vyraz { \$\$ = binLogVyraz(\$1, \$3, "ior"); }
| **Vyraz AND Vyraz** { \$\$ = binLogVyraz(\$1, \$3, "iand"); }

```
ATRV binLogVyraz(ATRV v1, ATRV v2, char *log_op) {  
    ATRV lv;  
    lv.kod = (char *) malloc(10 + strlen(v1.kod) + strlen(v2.kod));  
    if (v1.sig[0] == 'Z' && v2.sig[0] == 'Z') {  
        lv.sig = v1.sig;  
        printf(lv.kod, "%s%s\t%s\n", v1.kod, v2.kod, log_op);  
    } else {  
        yyerror("Nekompatibilne vyrazy pre logicky operator");  
        lv.sig = "?";  
        printf(lv.kod, "%s%s????\n", v1.kod, v2.kod);  
    }  
    free(v1.kod);  
    free(v2.kod);  
    return lv;  
}
```