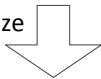


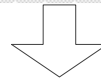
# Splitting the Iteration Space into Two

```
bb20:  
    edx = *(memLd+(edi + eax*4)/sizeof(int));  
    *(memSt + (ebx+eax*4)/sizeof(int)) = edx;  
    eax = eax+1;  
    if(eax != ecx)  
        goto bb20;  
end:
```

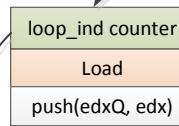
canonicalize



```
loop_ind = 0;  
upper_bound = ecx-eax;  
bb20:  
    edx = *(memLd+(edi + (eax+loop_ind)*4)/sizeof(int));  
    *(memSt + (ebx+(eax+loop_ind)*4)/sizeof(int)) = edx;  
    loop_ind = loop_ind+1;  
    if(loop_ind != upper_bound)  
        goto bb20;  
bb_end:
```

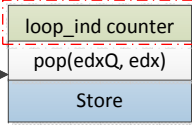


branchTag  
token for bb20:



branchTag token  
for bb\_end:

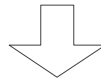
Duplicated loop\_ind  
counter node in CDFG



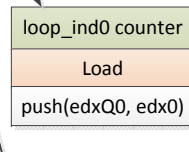
edxQ

⋮

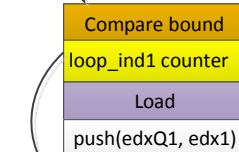
```
loop_ind0 = 0;  
upper_bound0 = (ecx-eax)/2;  
loop_ind1 = (ecx-eax)/2;  
upper_bound1 = ecx-eax;  
bb20:  
    edx0 = *(memLd+(edi + (eax+loop_ind0)*4)/sizeof(int));  
    *(memSt + (ebx+(eax+loop_ind0)*4)/sizeof(int)) = edx0;  
    loop_ind0 = loop_ind0+1;  
    if(loop_ind0 != upper_bound0)  
        goto bb20;  
if(upper_bound1 <= upper_bound0)  
    goto bb_end;  
bb20_dup:  
    edx1 = *(memLd+(edi + (eax+loop_ind1)*4)/sizeof(int));  
    *(memSt + (ebx+(eax+loop_ind1)*4)/sizeof(int)) = edx1;  
    loop_ind1 = loop_ind1+1;  
    if(loop_ind1 != upper_bound1)  
        goto bb20_dup;  
bb_end:
```



branchTag  
token for bb20:



edxQ0



branchTag token  
for bb\_end:

edxQ1

