

# REGISTER ALLOCATION

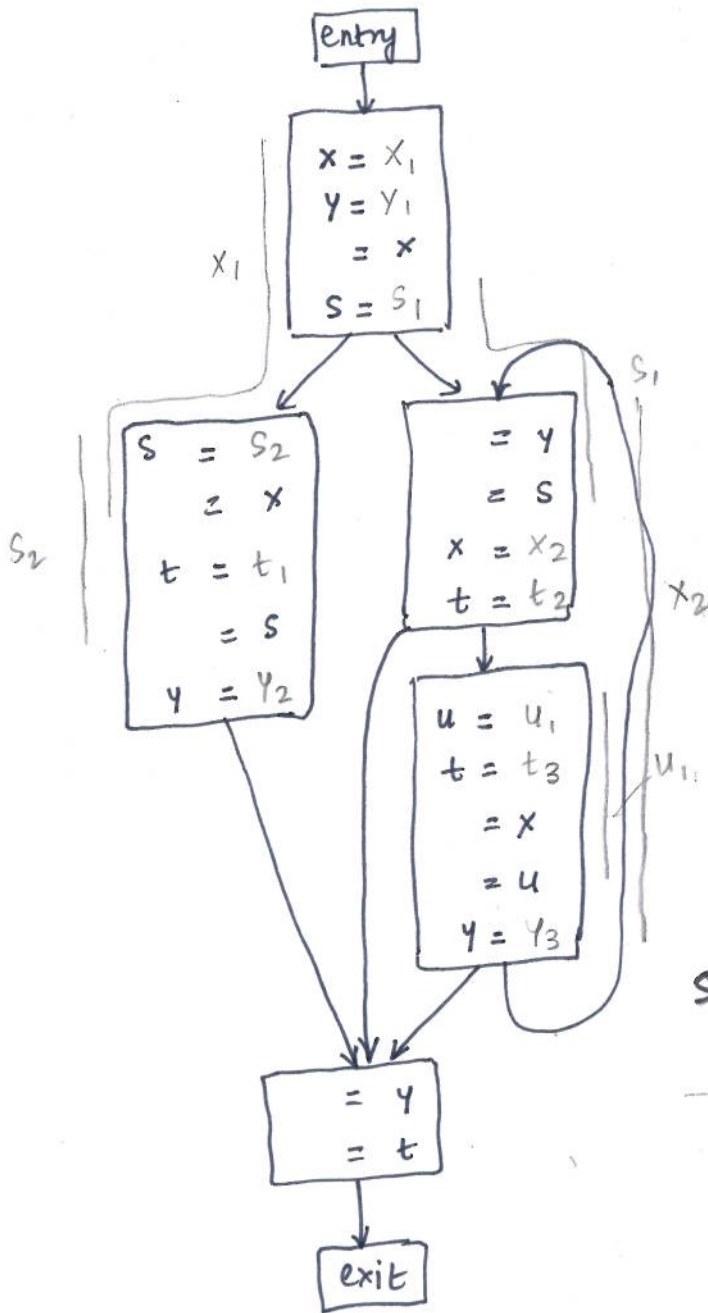


Fig (1a.) Code for Register Allocation Question

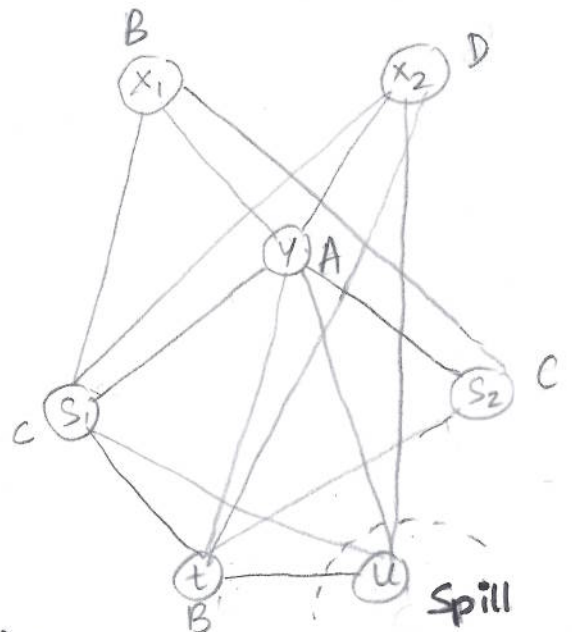
Merged Live Ranges:

$x_1, x_2$   
 $y \{y_1, y_2, y_3\}$  // equivalence class  
 $s_1, s_2$   
 $t \{t_1, t_2, t_3\}$  // equivalence class  
 $u$

Fig (1b.) Interference Graph

colors =  $\{A, B, C, D\}$

5-clique:  $\{y, x_2, s_1, t, u\}$



Spilling Cost	Nodes	Edges	Not Depend
$10^1 \times \frac{5}{6}$	y	$s_1, s_2, x_1, x_2, t, u$	[ ]
	$x_1$	$s_1, s_2, y$	$[x_2, t, u]$
$10^1 \times \frac{2}{4}$	$x_2$	$s_1, y, u, t$	$[x_1, s_2]$
$10^1 \times \frac{2}{5}$	$s_1$	$x_1, x_2, y, t, u$	$[s_2]$
	$s_2$	$x_1, y, t$	$[s_1, x_2, u]$
$10^1 \times \frac{4}{5}$	t	$s_1, s_2, y, x_2, u$	$[x_1]$
$10^1 \times \frac{2}{4}$	u	$s_1, x_2, y, t$	$[x_1, s_2]$