Instruction counts:

Total number of instructions: 1361
Arithmetic instructions:558
Logical instructions:91
Memory access instructions:450
Control transfer instructions:262

Final register state:

Program Counter: 112
R0: 0
R11: 1164
R12: 1956
R13: 2760
R14: 85
R15: -188
R16: 273
R17: 119
R18: 3560
R19: -1
R20: -2
R21: -1
R22: 76
R23: 3
R24: -1
R25: 101

Final Memory state:

Address: 2400, Contents: 2
Address: 2404, Contents: 4
Address: 2408, Contents: 6
Address: 2412, Contents: 8
Address: 2416, Contents: 10
Address: 2420, Contents: 12
Address: 2424, Contents: 14
Address: 2428, Contents: 16
Address: 2432, Contents: 18
Address: 2436, Contents: 29
Address: 2440, Contents: 22
Address: 2444, Contents: 24
Address: 2448, Contents: 26
Address: 2452, Contents: 28
Address: 2456, Contents: 30

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Address: 2460, Contents: 32
Address: 2464, Contents: 34
Address: 2468, Contents: 36
Address: 2472, Contents: 38
Address: 2476, Contents: 59
Address: 2480, Contents: 42
Address: 2484, Contents: 44
Address: 2488, Contents: 46
Address: 2492, Contents: 48
Address: 2496, Contents: 50
Address: 2500, Contents: 52
Address: 2504, Contents: 54
Address: 2508, Contents: 56
Address: 2512, Contents: 58
Address: 2516, Contents: 89
Address: 2520, Contents: 62
Address: 2524, Contents: 64
Address: 2528, Contents: 66
Address: 2532, Contents: 68
Address: 2536, Contents: 70
Address: 2540, Contents: 72
Address: 2544, Contents: 74
Address: 2548, Contents: 76
Address: 2552, Contents: 78
Address: 2556, Contents: 119
Address: 2560, Contents: 82
Address: 2564, Contents: 84
Address: 2568, Contents: 86
Address: 2572, Contents: 88
Address: 2576, Contents: 90
Address: 2580, Contents: 92
Address: 2584, Contents: 94
Address: 2588, Contents: 96
Address: 2592, Contents: 98
Address: 2596, Contents: 149
Address: 2600, Contents: 2
Address: 2604, Contents: 4
Address: 2608, Contents: 6
Address: 2612, Contents: 8
Address: 2616, Contents: 10
Address: 2620, Contents: 12
Address: 2624, Contents: 14
Address: 2628, Contents: 16
Address: 2632, Contents: 18
Address: 2636, Contents: 29
Address: 2640, Contents: 22
Address: 2644, Contents: 24
Address: 2648, Contents: 26
Address: 2652, Contents: 28
Address: 2656, Contents: 30
Address: 2660, Contents: 32
Address: 2664, Contents: 34
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Address: 2668, Contents: 36
Address: 2672, Contents: 38
Address: 2676, Contents: 59
Address: 2680, Contents: 42
Address: 2684, Contents: 44
Address: 2688, Contents: 46
Address: 2692, Contents: 48
Address: 2696, Contents: 50
Address: 2700, Contents: 52
Address: 2704, Contents: 54
Address: 2708, Contents: 56
Address: 2712, Contents: 58
Address: 2716, Contents: 89
Address: 2720, Contents: 62
Address: 2724, Contents: 64
Address: 2728, Contents: 66
Address: 2732, Contents: 68
Address: 2736, Contents: 70
Address: 2740, Contents: 72
Address: 2744, Contents: 74
Address: 2748, Contents: 76
Address: 2752, Contents: 78
Address: 2756, Contents: 119

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MIPS Pipeline Timing Simulator:


******Without Forwarding*****:

Total number of stalls without forwarding: 830
Total number of data hazards: 460
Total number of branches resulting in penalties: 179
Total number of clock cycles without forwarding: 2553

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******With Forwarding*****:

Total number of stalls with forwarding: 90
Total number of data hazards: 90
Total number of branches resulting in penalties: 179
Total number of clock cycles with forwarding: 1813

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