## Function Summary Report Function: f4

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| **Before Optimization** | **After Optimization** |
| C code :  **void** f4(**char** \*ch){  **int** i;  **for** (i=**0**;i < **strlen**(ch);i++){  **if** (ch[i] >= 'A' && ch[i] <= 'Z')  ch[i] -= ('A' - 'a');  }  } | C Code :  **void** f4(**char** \*ch){  **int** i,length;  length = **strlen**(ch);  **char** character;  **int** diff = 'A' - 'a';  **for** (i=**0**;i < length;i++){  character = ch[i];  **if** (character >= 'A' && character <= 'Z')  character -= diff;  }  } |
| Calculated # instruction executions:  n/a, since I did two functions I did calculations for f3 | Calculated # instruction executions:  n/a, since I did two functions I did calculations for f3 |
| rpistat results:  Cycles: 3,795,239,265  Instructions: 532,622,298 [2,130,489,192]  CPI: 1.781 | rpistat results:  Cycles: 9,730,885,971  Instructions: 1,671,676,217 [6,686,704,868]  CPI: 1.455 |
| % Performance improvement by optimization:  1 – (Cycles after optimization/Cycles before optimization) X 100% = 61% | |

## Focus of improvement: (check all that apply)

* code motion/precomputation
* sharing of common subexpressions
* strength reduction
* removing unnecessary procedure calls
* reduce memory references
* loop unrolling
* other (explain):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_