

## Report Assignment-7

We have developed a processor in C++ to execute the MIPS instructions. We have executed the MIPS instructions that are add, sub, lw, sw, sll, srl, j, jal, jr, beq, bne, bltz, beqz. We have executed these instructions and also counted the total number of each instruction and printed the total count of each instruction and also printed the total count of instructions as mentioned in the question. We have created a register array of strings in the code and also an array of memory of strings and then we have created methods to calculate which register is called in the MIPS instruction given in the input file and also checked extensively with our own test cases to verify if it is executing correctly. We have also created an array of tuple of string\*string to store the labels and index of it in the MIPS instructions given in the input file so that we can access the labels with the instruction line directly when we come across any jump or branch instructions.