

Address	main() Runtime Stack	Description	Register Pointers	sumOfSquares() Runtime Stack	Description	Register Pointers	square() Runtime Stack	Description	Register Pointers
x4FFD							int product	Local Variable (square)	<-R6 <-R5
x4FFE							R0	Save R0	
x4FFF							R1	Save R1	
x5000							R2	Save R2	
x5001							R3	Save R3	
x5002							R5	Save Previous Frame Pointer (R5)	
x5003							return address (R7)	Return Address (square)	
x5004							square() return value	Return Value (square)	
x5005				int x	Input to square()	<-R6	int x	Input to square()	
x5006				int sum	Local Variable (sumOfSquares)		int sum	Local Variable (sumOfSquares)	
x5007				int counter	Local Variable (sumOfSquares)	<-R5	int counter	Local Variable (sumOfSquares)	
x5008				R0	Save R0		R0	Save R0	
x5009				R1	Save R1		R1	Save R1	
x500A				R2	Save R2		R2	Save R2	
x500B				R3	Save R3		R3	Save R3	
x500C				R5	Save Previous Frame Pointer (R5)		R5	Save Previous Frame Pointer (R5)	
x500D				return address (R7)	Return Address (sumOfSquares)		return address (R7)	Return Address (sumOfSquares)	
x500E				sumOfSquares() return value	Return Value (sumOfSquares)		sumOfSquares() return value	Return Value (sumOfSquares)	
x500F	arraySize	Input to sumOfSquares()	<-R6	arraySize	Input to sumOfSquares()		arraySize	Input to sumOfSquares()	
x5010	*a (pointer to array)	Input to sumOfSquares()		*a (pointer to array)	Input to sumOfSquares()		*a (pointer to array)	Input to sumOfSquares()	
x5011	int total	Local Variable (main())		int total	Local Variable (main())		int total	Local Variable (main())	
x5012	int *array (pointer to array)	Local Variable (main())	<-R5	int *array (pointer to array)	Local Variable (main())		int *array (pointer to array)	Local Variable (main())	
x5013	main return value	Return Value		main return value	Return Value		main return value	Return Value	
	This is what the stack should look like when you setup the stack after calling main() NOTE: MAX_ARRAY_SIZE must be used for the arraySize value, this value will be stored in the GLOBAL VARIABLES section directly below your last instruction in main() USE R4 TO POINT TO THE GLOBAL VARIABLES SECTION OF MEMORY			This is what the stack should look like when you setup the stack after calling sumOfSquares()			This is what the stack should look like when you setup the stack after calling square() NOTE: square() gets called multiple times, so you have to POP everything starting at x5008 each time you exit square		