Step	Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part
1a	$\{C = \widehat{C}\}$
4	$B \rightarrow \left(B_L \,\middle|\, B_R \right)$, $C \rightarrow \left(C_L \,\middle|\, C_R \right)$ where B_L has 0 columns, C_L has 0 columns
2	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_L) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \wedge n(B_L) < n(B) \right\}$
5a	$\left(B_L \,\middle|\, B_R \right) \rightarrow \left(B_0 \,\middle|\, b_1 \;\; B_2 \right)$, $\left(C_L \,\middle|\, C_R \right) \rightarrow \left(C_0 \,\middle|\, c_1 \;\; C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
6	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
8	$c_1 := Ab_1 + c_1$
7	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; Ab_1 + \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
5b	$B \rightarrow \left(B_L \,\middle|\, B_R \right) \leftarrow \left(B_0 \;\; b_1 \,\middle|\, B_2 \right)$, $C \rightarrow \left(C_L \,\middle|\, C_R \right) \leftarrow \left(C_0 \;\; c_1 \,\middle|\, C_2 \right)$
2	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \wedge \neg(n(B_L) < n(B)) \right\}$
1b	$\{C := AB + \widehat{C}\}$

Step	Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part
1a	$\{$ $\}$
4	where
2	$\Big\{$ $\Big\}$
3	while do
2,3	$\Big\{$ $\wedge$ $\Big\}$
5a	where
6	$\Big\{$ $\Big\}$
8	
7	$\Big\{$ $\Big\}$
5b	
2	$\Big\{$ $\Big\}$
	endwhile
2,3	$\Big\{$ $\wedge \neg($ $)$ $\Big\}$
1b	$\{$ $\}$

Step	Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part
1a	$\{C = \widehat{C} \quad \}$
4	where
2	$\{ \quad \}$
3	while do
2,3	$\{ \quad \wedge \quad \}$
5a	where
6	$\{ \quad \}$
8	
7	$\{ \quad \}$
5b	
2	$\{ \quad \}$
	endwhile
2,3	$\{ \quad \wedge \neg(\quad) \quad \}$
1b	$\{C := AB + \widehat{C} \quad \}$

Step	Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part
1a	$\{ C = \widehat{C} \}$
4	where
2	$\left\{ \left(C_L \middle\| C_R \right) = \left(\widehat{C}_L \middle\| AB_R + \widehat{C}_R \right) \right\}$
3	while do
2,3	$\left\{ \left(C_L \middle\| C_R \right) = \left(\widehat{C}_L \middle\| AB_R + \widehat{C}_R \right) \wedge \right\}$
5a	where
6	$\{ \}$
8	
7	$\{ \}$
5b	
2	$\left\{ \left(C_L \middle\| C_R \right) = \left(\widehat{C}_L \middle\| AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \middle\| C_R \right) = \left(\widehat{C}_L \middle\| AB_R + \widehat{C}_R \right) \wedge \neg(\quad) \right\}$
1b	$\{ C := AB + \widehat{C} \}$

Step	Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part
1a	$\{C = \widehat{C}$ $\}$
4	where
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\quad \widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_L) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\quad \widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge n(B_L) < n(B) \right\}$
5a	where
6	$\left\{ \right\}$
8	
7	$\left\{ \right\}$
5b	
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\quad \widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\quad \widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge \neg(n(B_L) < n(B)) \right\}$
1b	$\{C := AB + \widehat{C}$ $\}$

Step	Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part
1a	$\{ C = \widehat{C} \}$
4	$B \rightarrow \left(B_L \,\middle|\, B_R \right)$, $C \rightarrow \left(C_L \,\middle|\, C_R \right)$ where B_L has 0 columns, C_L has 0 columns
2	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_L) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \wedge n(B_L) < n(B) \right\}$
5a	where
6	$\{ \}$
8	
7	$\{ \}$
5b	
2	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \wedge \neg (n(B_L) < n(B)) \right\}$
1b	$\{ C := AB + \widehat{C} \}$

Step	Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part
1a	$\{C = \widehat{C}$ $\}$
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2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_L) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge n(B_L) < n(B) \right\}$
5a	$\left(B_L \,\middle\|\, B_R \right) \rightarrow \left(B_0 \,\middle\|\, b_1 \;\; B_2 \right)$, $\left(C_L \,\middle\|\, C_R \right) \rightarrow \left(C_0 \,\middle\|\, c_1 \;\; C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
6	$\{ \quad \}$
8	
7	$\{ \quad \}$
5b	$B \rightarrow \left(B_L \,\middle\|\, B_R \right) \leftarrow \left(B_0 \;\; b_1 \,\middle\|\, B_2 \right)$, $C \rightarrow \left(C_L \,\middle\|\, C_R \right) \leftarrow \left(C_0 \;\; c_1 \,\middle\|\, C_2 \right)$
2	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \,\middle\|\, C_R \right) = \left(\widehat{C}_L \,\middle\|\, AB_R + \widehat{C}_R \right) \wedge \neg(n(B_L) < n(B)) \right\}$
1b	$\{C := AB + \widehat{C}$ $\}$

Step	Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part
1a	$\{C = \widehat{C} \qquad \}$
4	$B \rightarrow \left(B_L \mid B_R \right), C \rightarrow \left(C_L \mid C_R \right)$ where B_L has 0 columns, C_L has 0 columns
2	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_L) < n(B)$ do
2,3	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \wedge n(B_L) < n(B) \right\}$
5a	$\left(B_L \mid B_R \right) \rightarrow \left(B_0 \mid b_1 \;\; B_2 \right), \left(C_L \mid C_R \right) \rightarrow \left(C_0 \mid c_1 \;\; C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
6	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
8	
7	$\{ \qquad \}$
5b	$B \rightarrow \left(B_L \mid B_R \right) \leftarrow \left(B_0 \;\; b_1 \mid B_2 \right), C \rightarrow \left(C_L \mid C_R \right) \leftarrow \left(C_0 \;\; c_1 \mid C_2 \right)$
2	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \mid C_R \right) = \left(\widehat{C}_L \mid AB_R + \widehat{C}_R \right) \wedge \neg(n(B_L) < n(B)) \right\}$
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3	while $n(B_L) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \wedge n(B_L) < n(B) \right\}$
5a	$\left(B_L \,\middle|\, B_R \right) \rightarrow \left(B_0 \,\middle|\, b_1 \;\; B_2 \right), \left(C_L \,\middle|\, C_R \right) \rightarrow \left(C_0 \,\middle|\, c_1 \;\; C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
6	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
8	
7	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; Ab_1 + \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
5b	$B \rightarrow \left(B_L \,\middle|\, B_R \right) \leftarrow \left(B_0 \;\; b_1 \,\middle|\, B_2 \right), C \rightarrow \left(C_L \,\middle|\, C_R \right) \leftarrow \left(C_0 \;\; c_1 \,\middle|\, C_2 \right)$
2	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \right\}$
	endwhile
2,3	$\left\{ \left(C_L \,\middle|\, C_R \right) = \left(\widehat{C}_L \,\middle|\, AB_R + \widehat{C}_R \right) \wedge \neg (n(B_L) < n(B)) \right\}$
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Step	Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part
1a	$\{C = \widehat{C}$ $\}$
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2	$\left\{ \left(C_L \,\middle\vert\, C_R \right) = \left(\widehat{C}_L \,\middle\vert\, AB_R + \widehat{C}_R \right) \right\}$
3	while $n(B_L) < n(B)$ do
2,3	$\left\{ \left(C_L \,\middle\vert\, C_R \right) = \left(\widehat{C}_L \,\middle\vert\, AB_R + \widehat{C}_R \right) \wedge n(B_L) < n(B) \right\}$
5a	$\left(B_L \,\middle\vert\, B_R \right) \rightarrow \left(B_0 \,\middle\vert\, b_1 \;\; B_2 \right)$, $\left(C_L \,\middle\vert\, C_R \right) \rightarrow \left(C_0 \,\middle\vert\, c_1 \;\; C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
6	$\left\{ \left(C_0 \;\; c_1 \;\; C_2 \right) = \left(\widehat{C}_0 \;\; \widehat{c}_1 \;\; AB_2 + \widehat{C}_2 \right) \right\}$
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5b	$B \rightarrow \left(B_L \,\middle\vert\, B_R \right) \leftarrow \left(B_0 \;\; b_1 \,\middle\vert\, B_2 \right)$, $C \rightarrow \left(C_L \,\middle\vert\, C_R \right) \leftarrow \left(C_0 \;\; c_1 \,\middle\vert\, C_2 \right)$
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	endwhile
2,3	$\left\{ \left(C_L \,\middle\vert\, C_R \right) = \left(\widehat{C}_L \,\middle\vert\, AB_R + \widehat{C}_R \right) \wedge \neg(n(B_L) < n(B)) \right\}$
1b	$\{C := AB + \widehat{C}$ $\}$

	Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part
	$B \rightarrow \left(B_L \,\middle\|\, B_R \right)$, $C \rightarrow \left(C_L \,\middle\|\, C_R \right)$ where B_L has 0 columns, C_L has 0 columns
	while $n(B_L) < n(B)$ **do**
	$\left(B_L \,\middle\|\, B_R \right) \rightarrow \left(B_0 \,\middle\|\, b_1 \;\; B_2 \right)$, $\left(C_L \,\middle\|\, C_R \right) \rightarrow \left(C_0 \,\middle\|\, c_1 \;\; C_2 \right)$ where b_1 has 1 column, c_1 has 1 column
	$c_1 := Ab_1 + c_1$
	$B \rightarrow \left(B_L \,\middle\|\, B_R \right) \leftarrow \left(B_0 \;\; b_1 \,\middle\|\, B_2 \right)$, $C \rightarrow \left(C_L \,\middle\|\, C_R \right) \leftarrow \left(C_0 \;\; c_1 \,\middle\|\, C_2 \right)$
	endwhile

Algorithm: $C := AB + C$ where A is symmetric and stored in the lower triangular part

$B \rightarrow \left(B_L \,\middle|\, B_R \right)$, $C \rightarrow \left(C_L \,\middle|\, C_R \right)$

where B_L has 0 columns, C_L has 0 columns

while $n(B_L) < n(B)$ **do**

$\left(B_L \,\middle|\, B_R \right) \rightarrow \left(B_0 \,\middle|\, b_1 \;\; B_2 \right)$, $\left(C_L \,\middle|\, C_R \right) \rightarrow \left(C_0 \,\middle|\, c_1 \;\; C_2 \right)$

where b_1 has 1 column, c_1 has 1 column

$c_1 := Ab_1 + c_1$

$B \rightarrow \left(B_L \,\middle|\, B_R \right) \leftarrow \left(B_0 \;\; b_1 \,\middle|\, B_2 \right)$, $C \rightarrow \left(C_L \,\middle|\, C_R \right) \leftarrow \left(C_0 \;\; c_1 \,\middle|\, C_2 \right)$

endwhile