```
Gayle-Shapely
Invitations <- {}
Tentative <- {}
FreeM <- M
FreeW <- W
while there is an m in FreeM s.t. there is a w s.t. (m,w) not in Invitations
    choose such an m
    let w be m's highest ranked s.t. (m,w) not in Invitations
    add (m,w) to Invitations
    if w in FreeW then
        remove w from FreeW
        remove m from FreeM
        add (m,w) to Tentative
    else
        find m's.t. (m', w) in Tentative
        if w prefers m to m'
           remove (m', w) from Tentative
           add(m, w) to Tentative
           remove m from FreeM
           add m' to FreeM
return Tentative
```

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Gayle-Shapley
 Invitations <- {}
 Tentative <- {}
 FreeM <- M
 FreeW <- W
                                                                                     while not at a stable matching send a new invitation if accepted update current matching
 while there is an m in FreeM s.t. there is a w s.t. (m,w) not in Invitations
     choose such an m
     let w be m's highest ranked s.t. (m,w) not in Invitations
     add (m,w) to Invitations
     if w in FreeW then
         remove w from FreeW
         remove m from FreeM
         add (m,w) to Tentative
         find m' s.t. (m', w) in Tentative
         if w prefers m to m'
             remove (m', w) from Tentative
             add(m, w) to Tentative
             remove m from FreeM
             add m' to FreeM
 return Tentative
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FreeM <- M			Anchivsts C	X, Y, ₹ X, ₹, Y Z, X, Y
FreeW <- W			4   5	X,E,
Invitations <- {}			ŧLC	€,X,
Tentative <- {}			۶۷LX	A, B,
			Welkes 7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	A, B, A, C, C
while there is an m in FreeM s.t. there is a w s.t.	(m,w) not in Invitation	ns	3 2	A, B, A, C, A, B,
choose such an m	,		- <del>-</del>	, ,
let w be m's highest ranked s.t. (m,w) not in I	Invitations			
add (m,w) to Invitations	Invitations	Eree M	Freehol	Tentadi
	Aug. lan. 1811.3	K 2 1/	FreeW X, Y, Z	I Callal.
if w in FreeW then	/A V\	M,0,4	~, T, F	/ / v
remove w from FreeW	(A,X) (C,Z)			(//,/
remove m from FreeM	$(C, \varepsilon)$			( ) (
add (m,w) to Tentative				
else				
find m' s.t. (m', w) in Tentative				
if w prefers m to m'				
remove m from FreeM				
add m' to FreeM				
remove (m', w) from Tentative				
add(m, w) to Tentative				
return Tentative				

yle-Shapely				Pre fe rences
FreeM <- M			Anchiusts O D D	X, Y, Z Y, Z, Y Z, X, Y
FreeW <- W			Machia 7	X, Z, Y
Invitations <- {}			₹ L C	₹,X, Y
Tentative <- {}			×۲×	A,B,C
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choose such an m				, , , ,
let w be m's highest ranked s.t. (m,w) not in	Invitations			
add (m,w) to Invitations	Invitations	FreeM	FreeW	Tentadive
		K 8.4	XX7/	
if w in FreeW then	(A, X)	100	- 707	$(A \times)$
remove w from FreeW	((2)			112
remove m from FreeM	(0, 2)			10,27
add (m,w) to Tentative	10.2			102
else	(C, E) (B, X) (B, E) (C, X)			(0,2)
find m' s.t. (m', w) in Tentative	$(\mathcal{L}, \mathcal{X})$	<b>A</b>	~	( 0 \
if w prefers m to m'	(C,Y)	A		(C, Y)
remove m from FreeM		B	<b>Y</b>	
add m' to FreeM		(/	7	
remove (m', w) from Tentative				
add(m, w) to Tentative				
return Tentative				

/le-Shapely					Pre fe renc
	P.1.22:24	km. 7		<b>→</b> Γ Δ	X, Y, 2
reeM <- M	Running			Anthiusts	X 2 (
reeW <- W	( 1111 )	Calana rake	<b>1</b> <	4 /	X, Z, Y
nvitations <- {}				E [ C	
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choose such an m	3 a w 3.c. (111,1	Wy Hot III III Witatio	113	3 2 0	71) 5)
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0 ( )	,				
add (m,w) to Invitations		Invitations	FreeM	FreeW	Tentadi
			K & C	X Y 7/	- 4-11-13-
if <mark>w in FreeW t</mark> hen		(A, X)	7 /2/	77)7	(Ax
remove w from FreeW		((2)			
remove m from FreeM		(C, Z)			1-37
add (m,w) to Tentative					10 7
else		(B, Z)			(B, Z
find m' s.t. (m', w) in Tentative		$(\mathcal{C}, X)$	<b>A</b>	~	
if w prefers m to m'		(C, Y)	A -	X	(C,
remove m from FreeM			B >	<b>Y</b>	
add m' to FreeM			c/	~	
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eturn Tentative					