

```

function combined = combine(ArrayA, ArrayB, A, B)
% Receives two arrays that indicate the location of a type of event
% Conserves the type of event while merging the two arrays by overwriting the events✓
of B with A
%
% See also mathematica.m and nextMatch.m

% Prep for looping with initialization of needed variables
lenA = length(ArrayA); lenB = length(ArrayB);
combined = []; j = 1; k = 1;

% Preserve Identity of Identifying Peaks, if needed
if length(ArrayB(1,:)) == 2
    B = ArrayB(:,2);
else
    B = linspace(B,B,length(ArrayB(:,1)))';
end

% Loop through the arrays provided into one long array, combined
for i = 1:(lenB+lenA)
    if k > lenA
        % If every value of A is represented, i.e. past the max of arrayA:
        combined(i,:) = [ArrayB(j), B(j)];
        j = j+1;
    elseif j > lenB
        % If every value of B is represented
        combined(i,:) = [ArrayA(k), A];
        k = k + 1;
    elseif ArrayB(j) < ArrayA(k)
        % Check if current B value occurs before the current A
        combined(i,:) = [ArrayB(j), B(j)];
        j = j + 1;
    elseif ArrayB(j) >= ArrayA(k)
        % Check if current B value is the same or less than the current A
        combined(i,:) = [ArrayA(k), A];
        k = k + 1;
    else
        % disp('Else') % for testing
    end
end
end
end

```