character width direction;

detecting a character width direction range as a range in a character width direction in which characters of the character string are arranged, from the object image;

determining a character center candidate range to each character of the character string as an area which contains a center of the character height direction range and contains a center of the character width direction range in the character width direction for the object image;

setting a plurality of rectangular character candidate areas, in each of which an intersection of diagonal lines coincides with each of points of the character center candidate range;

carrying out character recognition processing to each of a part of the plurality of character candidate areas of the object image, and acquiring a character recognition result for each of the plurality of character candidate areas to each of characters of the character string; and

determining a character recognition result for each character of the character string from the character recognition results of each of the plurality of character candidate areas.

7. A non-transitory computer-readable recording medium which stores a program, when being executed, for making a processor execute a group of steps of:

detecting a character height direction range as a range in a character height direction perpendicular to a character width direction in a character string from an object image which is a gray-scale image and in which the character string is picked up that contains characters arranged in the character width direction;

detecting a character width direction range as a range in a character width direction in which characters of the character string are arranged, from the object image;

determining a character center candidate range to each character of the character string as an area which contains a center of the character height direction range and contains a center of the character width direction range in the character width direction for the object image;

setting a plurality of rectangular character candidate areas, in each of which an intersection of diagonal lines coincides with each of points of the character center candidate range;

carrying out character recognition processing to each of a part of the plurality of character candidate areas of the object image, and acquiring a character recognition result for each of the plurality of character candidate areas to each of characters of the character string; and

determining a character recognition result for each character of the character string from the character recognition results of each of the plurality of character candidate areas.

character width direction;

detecting a character width direction range as a range in a character width direction in which characters of the character string are arranged, from the object image;

determining a character center candidate range to each character of the character string as an area which contains a center of the character height direction range and contains a center of the character width direction range in the character width direction for the object image;

setting a plurality of rectangular character candidate areas, in each of which an intersection of diagonal lines coincides with each of points of the character center candidate range;

carrying out character recognition processing to each of a part of the plurality of character candidate areas of the object image, and acquiring a character recognition result for each of the plurality of character candidate areas to each of characters of the character string; and

determining a character recognition result for each character of the character string from the character recognition results of each of the plurality of character candidate areas.