CLAIMS

1. A program for program editing for editing a program described using a symbol on a program editing screen,

the program for program editing causing a computer to function as:

input-gesture-characteristic-information acquiring unit for acquiring input gesture characteristic information including coordinate information and a shape of a track of the coordinate information input on the program editing screen; and

processing executing unit for specifying an operation target and specifying a command applied to the operation target as well on the basis of the input gesture characteristic information, executing the command, and displaying a result of execution of the command on the program editing screen.

2. The program for program editing according to claim 1, wherein the processing executing unit specifies the command on the basis of a gesture definition that associates a type of the operation target, the shape of the track, and a command to be executed.

3. The program for program editing according to claim 1, wherein the input gesture characteristic information further includes a direction of the track of the coordinate information.

4. The program for program editing according to claim 3, wherein the processing executing unit specifies the command on the basis of a gesture definition that associates a type of the operation target, the shape and the direction of the track, and a command to be executed.

5. The program for program editing according to claim 2 or 4, wherein the processing executing unit acquires an input character string on the basis of information included in the input gesture characteristic information and, when a command corresponding to the input character string is present in the gesture definition, registers the input character string in the operation target.

6. The program for program editing according to claim 2 or 4, wherein

the input-gesture-characteristic-information acquiring unit acquires a first input track, which is a record of passing points from a start point to an end point of the coordinate information at first resolution, and a second input track, which is a record of the passing points from the start point to the end point of the coordinate information at second resolution higher than the first resolution, and

the processing executing unit judges whether a command corresponding to the first input track is present in the gesture definition and judges whether a command corresponding to the second input track is present in the gesture definition.

7. The program for program editing according to claim 6, wherein the processing executing unit acquires an input character string on the basis of the second input track and, when a command corresponding to the input character string is present in the gesture definition, registers the input character string in the operation target.

8. The program for program editing according to any one

of claims 1 to 4, wherein

the processing executing unit judges whether the operation target is a constituent element for a character input, and

the input-gesture-characteristic-information acquiring unit acquires, when it is judged that the operation target is not the constituent element for a character input, a first input track, which is a record of the coordinate information of passing points from a start point to an end point at first resolution, and acquires, when it is judged that the operation target is the constituent element for the character input, a second input track, which is a record of the coordinate information of the passing points from the start point to the end point at second resolution higher than the first resolution.

9. The program for program editing according to claim 8, wherein, when the second input track is acquired, the processing executing unit acquires an input character string on the basis of the second input track and registers the input character string in the operation target.

10. The program for program editing according to any one of claims 1 to 9, wherein, when only a left bus and a right bus are placed on the program editing screen, the input-gesture-characteristic-information acquiring unit acquires a third input track, which is a record of the coordinate information of the passing points from the start point to the end point at third resolution lower than the first resolution.

11. The program for program editing according to any one of claims 1 to 10, wherein the processing executing unit

has a function of, in specifying the operation target on the basis of the coordinate information, when a plurality of choices of the operation target are present, displaying the choices of the operation target as a list.

12. The program for program editing according to claim 11, wherein the processing executing unit has a function of capable of choosing the operation target from the choices of the operation target.

13. The program for program editing according to any one of claims 1 to 12, wherein the processing executing unit has a function of displaying, in changing a type of the operation target, choices of the type as a list and a function of capable of choosing the type from the choices.

14. The program for program editing according to any one of claims 1 to 13, wherein a track of input operation is displayed on the program editing screen.

15. The program for program editing according to any one of claims 1 to 14, wherein a guide line indicating a range in which input operation is possible is displayed on the program editing screen.

16. The program for program editing according to any one of claims 1 to 15, wherein, when a start point of the track is present in a predetermined position of the operation target, the processing executing unit moves the operation target along an input operation.

17. The program for program editing according to claim 16, wherein, when the placed element is in a movement state,

the processing executing unit performs processing for changing a display state of the placed element.

18. The program for program editing according to any one of claims 1 to 17, wherein the processing executing unit is capable of changing, according to information concerning possibility of program editing, a command to be executed.

19. The program for program editing according to any one of claims 1 to 18, wherein the processing executing unit is capable of changing a state of input/output of a control apparatus.

20. The program for program editing according to any one of claims 1 to 19, wherein the processing executing unit includes a command for instructing display of help information concerning the gesture definition.

21. The program for program editing according to any one of claims 2 and 4 to 20, wherein

in the gesture definition, a program constituent element including an instruction statement as a type of the operation target is defined and a change of the command sentence of the program constituent element including the command sentence as the command is defined, and

when the type of the operation target is the program constituent element including an instruction statement, the processing executing unit changes, on the basis of the input gesture characteristic information and the gesture definition, the instruction statement already stored in the program constituent element.

CLAIMS

[Claim 1]

A program for program editing for editing a program described using a symbol on a program editing screen, the program for program editing causing a computer to function as:

input-gesture-characteristic-information acquiring unit for acquiring input gesture characteristic information including coordinate information and a shape of a track of the coordinate information input on the program editing screen; and

processing executing unit for specifying an operation target and specifying a command applied to the operation target as well on the basis of the input gesture characteristic information, executing the command, and displaying a result of execution of the command on the program editing screen, wherein

the processing executing unit specifies the command on the basis of a gesture definition that associates a type of the operation target, the shape of the track, and a command to be executed, executes the specified command, and displays a result of execution of the command on the program editing screen.

[Claim 2]

A program for program editing for editing a program described using a symbol on a program editing screen, the program for program editing causing an information processing apparatus to function as:

input-gesture-characteristic-information acquiring unit for acquiring input gesture characteristic information including coordinate information, a shape of a track of the coordinate information, and a direction of the track input on the program editing screen; and

processing executing unit for specifying an operation target and specifying a command applied to the operation target as well on the basis of the input gesture characteristic information, executing the command, and displaying a result of execution of the command on the program editing screen, wherein

the processing executing unit specifies the command on the basis of a gesture definition that associates a type of the operation target, the shape and the direction of the track, and a command to be executed, executes the specified command, and displays a result of execution of the command on the program editing screen.

[Claim 3]

The program for program editing according to claim 1 or 2, wherein the processing executing unit acquires an input character string on the basis of information included in the input gesture characteristic information and, when a command corresponding to the input character string is present in the gesture definition, registers the input character string in the operation target.

[Claim 4]

The program for program editing according to claim 1 or 2, wherein

the input-gesture-characteristic-information acquiring unit acquires a first input track, which is a record of passing points from a start point to an end point of the coordinate information at first resolution, and a second input track, which is a record of the passing points from the start point to the end point of the coordinate information at second resolution higher than the first resolution, and

the processing executing unit judges whether a command corresponding to the first input track is present in the

gesture definition and judges whether a command corresponding to the second input track is present in the gesture definition.

[Claim 5]

The program for program editing according to claim 4, wherein the processing executing unit acquires an input character string on the basis of the second input track and, when a command corresponding to the input character string is present in the gesture definition, registers the input character string in the operation target.

[Claim 6]

The program for program editing according to claim 1 or 2, wherein

the processing executing unit judges whether the operation target is a constituent element for a character input, and

the input-gesture-characteristic-information acquiring unit acquires, when it is judged that the operation target is not the constituent element for a character input, a first input track, which is a record of the coordinate information of passing points from a start point to an end point at first resolution, and acquires, when it is judged that the operation target is the constituent element for the character input, a second input track, which is a record of the coordinate information of the passing points from the start point to the end point at second resolution higher than the first resolution.

[Claim 7]

The program for program editing according to claim 6, wherein, when the second input track is acquired, the processing executing unit acquires an input character string

on the basis of the second input track and registers the input character string in the operation target.

[Claim 8]

The program for program editing according to any one of claims 4 to 7, wherein, when only a left bus and a right bus are placed on the program editing screen, the inputgesture-characteristic-information acquiring unit acquires a third input track, which is a record of the coordinate information of the passing points from the start point to the end point at third resolution lower than the first resolution.

[Claim 9]

The program for program editing according to any one of claims 1 to 8, wherein the processing executing unit has a function of, in specifying the operation target on the basis of the coordinate information, when a plurality of choices of the operation target are present, displaying the choices of the operation target as a list.

[Claim 10]

The program for program editing according to claim 9, wherein the processing executing unit has a function of capable of choosing the operation target from the choices of the operation target.

[Claim 11]

The program for program editing according to any one of claims 1 to 10, wherein the processing executing unit has a function of displaying, in changing a type of the operation target, choices of the type as a list and a function of capable of choosing the type from the choices.

[Claim 12]

The program for program editing according to any one of claims 1 to 11, wherein a track of input operation is displayed on the program editing screen.

[Claim 13]

The program for program editing according to any one of claims 1 to 12, wherein a guide line indicating a range in which input operation is possible is displayed on the program editing screen.

[Claim 14]

The program for program editing according to any one of claims 1 to 13, wherein, when a start point of the track is present in a predetermined position of the operation target, the processing executing unit moves the operation target along an input operation.

[Claim 15]

The program for program editing according to claim 14, wherein, when the operation target is in a movement state, the processing executing unit performs processing for changing a display state of the operation target.

[Claim 16]

The program for program editing according to any one of claims 1 to 15, wherein the processing executing unit is capable of changing, according to information concerning possibility of program editing, a command to be executed.

[Claim 17]

The program for program editing according to any one of claims 1 to 16, wherein the processing executing unit is capable of changing a state of input/output of a control apparatus.

[Claim 18]

The program for program editing according to any one of claims 1 to 17, wherein the processing executing unit includes a command for instructing display of help information concerning the gesture definition.

[Claim 19]

The computer-readable recording medium that stores therein the program for program editing according to any one of claims 1 and 2 to 18, wherein

in the gesture definition, a program constituent element including an instruction statement as a type of the operation target is defined and a change of the command sentence of the program constituent element including the command sentence as the command is defined, and

when the type of the operation target is the program constituent element including an instruction statement, the processing executing unit changes, on the basis of the input gesture characteristic information and the gesture definition, the instruction statement already stored in the program constituent element.