CLAIMS

1. A computer program product for facilitating processing within a computing environment, the computer program product comprising:

one or more computer readable storage media and program instructions collectively stored on the one or more computer readable storage media to perform a method comprising:

executing ~~an~~ a convert instruction to perform converting and scaling operations, the executing the convert instruction comprising:

converting an input value from one format to provide a converted result in another format;

scaling the converted result to provide a scaled result~~; and~~, wherein the scaling includes, as part of executing the convert instruction:

obtaining, using a field of the convert instruction, a scale value;

determining whether the scale value is valid, wherein the determining is based on a preselected value;

using the scale value to determine a scale factor different from the scale value, based on determining that the scale value is valid; and

using the scale factor in scaling the converted result to provide the scaled result; and

placing a result obtained from the scaled result in a selected location.

2. The computer program product of claim 1, wherein the one format is a hexadecimal floating point format and the other format is a decimal format.

3. The computer program product of claim 2, wherein the decimal format is a binary coded decimal format.

~~4. The computer program product of any one of the preceding claims, wherein the scaling comprises:~~

~~determining a scale factor; and~~

~~using the scale factor in scaling the converted result to provide the scaled result.~~

~~5.~~4. The computer program product of claim ~~4~~1, ~~wherein the determining the scale factor comprises:~~

~~obtaining a scale value using an operand of the instruction;~~

~~using the scale value to determine the scale factor; and~~

~~wherein~~ the using the scale factor comprises multiplying the converted result by the scale factor to obtain the scaled result.

~~6.~~5. The computer program product of ~~any one of the preceding claims~~claim 1, wherein the executing the instruction further comprises rounding the scaled result to provide a rounded result.

~~7.~~6. The computer program product of claim ~~6~~5, wherein the rounding comprises:

obtaining a rounding mode using a field of the instruction; and

rounding the scaled result to the rounded result based on the rounding mode.

~~8.~~7. The computer program product of claim ~~7~~6, wherein the placing comprises:

selecting a portion of the rounded result as the result; and

placing the result in the selected location.

~~9.~~8. The computer program product of ~~any one of the preceding claims~~claim 1, wherein the executing the instruction further comprises:

determining a sign of the result; and

placing the sign of the result in the selected location.

~~10.~~9. The computer program product of ~~any one of the preceding claims~~claim 1, wherein the selected location comprises a register specified using a field of the instruction.

~~11.~~10. A computer system for facilitating processing within a computing environment, the computer system comprising:

a memory; and

a processor in communication with the memory, wherein the computer system is configured to perform a method, said method comprising:

executing ~~an~~ a convert instruction to perform converting and scaling operations, the executing the convert instruction comprising:

converting an input value from one format to provide a converted result in another format;

scaling the converted result to provide a scaled result~~; and~~, wherein the scaling includes, as part of executing the convert instruction:

~~placing a result obtained from the scaled result in a selected location.~~

~~12. The computer system of claim 11, wherein the scaling comprises:~~

~~determining a scale factor; and~~obtaining, using a field of the convert instruction, a scale value;

determining whether the scale value is valid, wherein the determining is based on a preselected value;

using the scale value to determine a scale factor different from the scale value, based on determining that the scale value is valid; and

using the scale factor in scaling the converted result to provide the scaled result~~.~~; and

placing a result obtained from the scaled result in a selected location.

11. The computer system of claim 10, wherein the using the scale factor comprises multiplying the converted result by the scale factor to obtain the scaled result.

~~13.~~12. The computer system of claim ~~11 or 12~~10, wherein the executing the instruction further comprises rounding the scaled result to provide a rounded result.

~~14.~~13. The computer system of claim ~~13~~12, wherein the rounding comprises:

obtaining a rounding mode using a field of the instruction; and

rounding the scaled result to the rounded result based on the rounding mode.

~~15.~~14. The computer system of claim ~~14~~13, wherein the placing comprises:

selecting a portion of the rounded result as the result; and

placing the result in the selected location.

~~16.~~15. A computer-implemented method of facilitating processing within a computing environment, the computer-implemented method comprising:

executing ~~an~~ a convert instruction to perform converting and scaling operations, the executing the convert instruction comprising:

converting an input value from one format to provide a converted result in another format;

scaling the converted result to provide a scaled result~~; and~~, wherein the scaling includes, as part of executing the convert instruction:

obtaining, using a field of the convert instruction, a scale value;

determining whether the scale value is valid, wherein the determining is based on a preselected value;

using the scale value to determine a scale factor different from the scale value, based on determining that the scale value is valid; and

using the scale factor in scaling the converted result to provide the scaled result; and

placing a result obtained from the scaled result in a selected location.

~~17.~~16. The computer-implemented method of claim ~~16~~15, wherein the ~~scaling comprises:~~

~~determining a scale factor; and~~

using the scale factor ~~in scaling~~comprises multiplying the converted result by the scale factor to ~~provide~~ obtain the scaled result.

~~18.~~17. The computer-implemented method of ~~claims 16 or 17~~claim 15, wherein the executing the instruction further comprises rounding the scaled result to provide a rounded result.

~~19.~~18. The computer-implemented method of claim ~~18~~17, wherein the rounding comprises:

obtaining a rounding mode using a field of the instruction; and

rounding the scaled result to the rounded result based on the rounding mode.

~~20.~~19. The computer-implemented method of claim ~~19~~18, wherein the placing comprises:

selecting a portion of the rounded result as the result; and

placing the result in the selected location.

~~21.~~20. A computer program product for facilitating processing within a computing environment, the computer program product comprising:

one or more computer readable storage media and program instructions collectively stored on the one or more computer readable storage media to perform a method comprising:

executing ~~an~~ a convert instruction to perform scaling and converting operations, the executing the convert instruction comprising:

scaling an input value in one format to provide a scaled result~~;~~, wherein the scaling includes, as part of executing the convert instruction:

obtaining, using a field of the convert instruction, a scale value;

determining whether the scale value is valid, wherein the determining is based on a preselected value;

using the scale value to determine a scale factor different from the scale value, based on determining that the scale value is valid; and

using the scale factor in scaling the input value to provide the scaled result;

converting the scaled result from the one format to provide a converted result in another format; and

placing a result obtained from the converted result in a selected location.

~~22. The computer program product of claim 21, wherein the one format is a decimal format and the other format is a hexadecimal floating point format.~~

~~23. The computer program product of claim 22, wherein the decimal format is a binary-coded decimal format.~~

~~24.~~21. The computer program product of ~~any one of the claims 21 to 23~~claim 20, wherein the executing the instruction further comprises rounding a version of the converted result to provide a rounded result, and wherein the result is obtained using the rounded result.

~~25.~~22. The computer program product of claim ~~24~~21, wherein the selected location is a register specified using a field of the instruction, and wherein the placing the result in the selected location comprises:

determining a format for the result; and

placing the result in the register based on the format.

23. The computer system of claim 10, wherein the executing the instruction further comprises:

determining a sign of the result; and

placing the sign of the result in the selected location.

24. A computer-implemented method of facilitating processing within a computing environment, the computer-implemented method comprising:

executing a convert instruction to perform scaling and converting operations, the executing the convert instruction comprising:

scaling an input value in one format to provide a scaled result, wherein the scaling includes, as part of executing the convert instruction:

obtaining, using a field of the convert instruction, a scale value;

determining whether the scale value is valid, wherein the determining is based on a preselected value;

using the scale value to determine a scale factor different from the scale value, based on determining that the scale value is valid; and

using the scale factor in scaling the input value to provide the scaled result;

converting the scaled result from the one format to provide a converted result in another format; and

placing a result obtained from the converted result in a selected location.

25. The computer-implemented method of claim 24, wherein the executing the instruction further comprises rounding a version of the converted result to provide a rounded result, and wherein the result is obtained using the rounded result.

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