# GEAR BOX

# Software for Game Character Gear Generation Manual

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## Introduction

Gear Box is software that generates random pieces of gear (boots, pants and chest pieces) that can be equipped to a game character. The purpose of the software is to provide a user with an assortment of random gear to equip to a character. Each piece of gear has three main statistics: Power, defense, and accuracy. Each piece of gear has a unique statistic: Boots have speed, pants have endurance, and chests have durability.

```
This is the gear:
 1) Chest |  Power: 17  Defense: 18  Accuracy: 18%  Durability: 26
 2) Boots |  Power: 19  Defense: 26  Accuracy: 17%  Speed:      22
 3) Pants |  Power: 27  Defense: 21  Accuracy: 23%  Endurance:  21
 4) Boots |  Power: 23  Defense: 21  Accuracy: 28%  Speed:      15
 5) Pants |  Power: 23  Defense: 24  Accuracy: 28%  Endurance:  16
 6) Pants |  Power: 16  Defense: 17  Accuracy: 12%  Endurance:  11
 7) Chest |  Power: 19  Defense: 24  Accuracy: 12%  Durability: 22
 8) Boots |  Power: 13  Defense: 26  Accuracy: 14%  Speed:      11
 9) Pants |  Power: 12  Defense: 15  Accuracy: 14%  Endurance:  24
10) Pants |  Power: 26  Defense: 28  Accuracy: 26%  Endurance:  28
```

Figure 1 - The gear selection is represented by a table

## Gear Box

The purpose of this software is to give a user the opportunity to tune their character's statistics based on the user's play style. When a gear box is opened, a list of ten random pieces of gear is generated. Random statistics are generated so that each gear box is unique. However likely, there is no guarantee that a gear box will contain at least boots, pants, and a chest.

## Equipped Gear

This section displays the currently equipped gear. The character begins with a base of zero for each statistic. As the user equips gear, the pieces of gear are added to the equipped gear section. See figure 2.

```
Equipped gear:
Boots: empty
Pants: empty
Chest: empty
Current statistics:
Power: 0  Defense: 0  Accuracy: 0%
```

Figure 2 - The program displays the status of the character's statistics.

## User Options

The user is presented with an array of options. See figure 3 for the options. The user would benefit from sorting the gear first by Power, Defense or Accuracy. Doing so would help identify which pieces of gear are best suited for the user's needs. Once the gear is sorted, the user may choose to filter by gear type. When the user has identified a piece of gear, they may choose to equip the piece of gear.

```
-Enter EQUIP to equip.
-Enter QUIT to quit.
-Enter BOOTS, PANTS, or CHEST to filter by gear type.
-Enter POWER, DEFENSE, or ACCURACY to sort by statistic type:
```

Figure 3 - The user can enter by command line which options to choose

## Sorting the Gear

Once the user is ready to sort the gear, he or she may enter Power, Defense, or Accuracy. To create a character with a powerful attack, enter POWER in to the console. See figure 4.

```
This is the gear:
 1) Pants |  Power: 27  Defense: 21  Accuracy: 23%  Endurance:  21
 2) Pants |  Power: 26  Defense: 28  Accuracy: 26%  Endurance:  28
 3) Boots |  Power: 23  Defense: 21  Accuracy: 28%  Speed:      15
 4) Pants |  Power: 23  Defense: 24  Accuracy: 28%  Endurance:  16
 5) Boots |  Power: 19  Defense: 26  Accuracy: 17%  Speed:      22
 6) Chest |  Power: 19  Defense: 24  Accuracy: 12%  Durability: 22
 7) Chest |  Power: 17  Defense: 18  Accuracy: 18%  Durability: 26
 8) Pants |  Power: 16  Defense: 17  Accuracy: 12%  Endurance:  11
 9) Boots |  Power: 13  Defense: 26  Accuracy: 14%  Speed:      11
10) Pants |  Power: 12  Defense: 15  Accuracy: 14%  Endurance:  24
```

Figure 4 - This is gear sorted by Power

## Equipping Gear

Once a piece of gear is identified, the user may type EQUIP. The console will prompt the user to enter a valid number associated with the piece of gear in the table. See figure 5.

```
-Enter EQUIP to equip.
-Enter QUIT to quit.
-Enter BOOTS, PANTS, or CHEST to filter by gear type.
-Enter POWER, DEFENSE, or ACCURACY to sort by statistic type:
equip
-Enter number (1-10) to equip gear.
1
```

Figure 5 - The equip function will only accept gear numbers in the range of the collection size

```
Equipped gear:
Boots: Boots |   Power: 23  Defense: 21  Accuracy: 28%  Speed:        15
Pants: Pants |   Power: 27  Defense: 21  Accuracy: 23%  Endurance:  21
Chest: empty
Current statistics:
Power: 50  Defense: 42  Accuracy: 51%
----------------------------------------------------------------------
-Enter EQUIP to equip.
-Enter QUIT to quit.
-Enter BOOTS, PANTS, or CHEST to filter by gear type.
-Enter POWER, DEFENSE, or ACCURACY to sort by statistic type:
chest
This is the gear filtered by CHEST:
 4) Chest |   Power: 19  Defense: 24  Accuracy: 12%  Durability: 22
 5) Chest |   Power: 17  Defense: 18  Accuracy: 18%  Durability: 26
---------------------------------------------------------------------
-Enter EQUIP to equip.
-Enter QUIT to quit.
-Enter BOOTS, PANTS, or CHEST to filter by gear type.
-Enter POWER, DEFENSE, or ACCURACY to sort by statistic type:
equip
-Enter number (1-8) to equip gear.
4
This is the gear:
 1) Pants |   Power: 26  Defense: 28  Accuracy: 26%  Endurance:  28
 2) Pants |   Power: 23  Defense: 24  Accuracy: 28%  Endurance:  16
 3) Boots |   Power: 19  Defense: 26  Accuracy: 17%  Speed:        22
 4) Chest |   Power: 17  Defense: 18  Accuracy: 18%  Durability: 26
 5) Pants |   Power: 16  Defense: 17  Accuracy: 12%  Endurance:  11
 6) Boots |   Power: 13  Defense: 26  Accuracy: 14%  Speed:        11
 7) Pants |   Power: 12  Defense: 15  Accuracy: 14%  Endurance:  24

Equipped gear:
Boots: Boots |   Power: 23  Defense: 21  Accuracy: 28%  Speed:        15
Pants: Pants |   Power: 27  Defense: 21  Accuracy: 23%  Endurance:  21
Chest: Chest |   Power: 19  Defense: 24  Accuracy: 12%  Durability: 22
Current statistics:
Power: 69  Defense: 66  Accuracy: 63%
---------------------------------------------------------------------
-Enter EQUIP to equip.
-Enter QUIT to quit.
-Enter BOOTS, PANTS, or CHEST to filter by gear type.
-Enter POWER, DEFENSE, or ACCURACY to sort by statistic type:
```

Figure 6 - Once two gear slots are full, the gear box can be filter out unnecessary gear

## Filtering Gear Type

Once there are two pieces of gear equipped, it may be easier to filter the gear box down to whichever gear slot is empty. See figure 6. Based on the empty gear slot, filter the gear box by the gear slot type. Filtering can be done by entering the gear type Boots, Pants, or Chest. The user can then enter equip and then the number associated with the piece of gear.

Equipping a piece of gear when the character already has that gear type equipped will result in a gear swap. The previously equipped piece of gear will be placed back in the gear box and then selected piece of gear will be equipped.

```
-Enter EQUIP to equip.
-Enter QUIT to quit.
-Enter BOOTS, PANTS, or CHEST to filter by gear type.
-Enter POWER, DEFENSE, or ACCURACY to sort by statistic type:
endurance
Please enter a valid option:
equip
-Enter number (1-7) to equip gear.
17
Input invalid: -Enter number (1-7) to equip gear.
1
This is the gear:
 1) Pants │  Power: 27  Defense: 21  Accuracy: 23%  Endurance:   21
 2) Pants │  Power: 23  Defense: 24  Accuracy: 28%  Endurance:   16
 3) Boots │  Power: 19  Defense: 26  Accuracy: 17%  Speed:       22
 4) Chest │  Power: 17  Defense: 18  Accuracy: 18%  Durability: 26
 5) Pants │  Power: 16  Defense: 17  Accuracy: 12%  Endurance:   11
 6) Boots │  Power: 13  Defense: 26  Accuracy: 14%  Speed:       11
 7) Pants │  Power: 12  Defense: 15  Accuracy: 14%  Endurance:   24
```

**Figure 7 - Entering invalid input**

## Checking for Invalid Input

The program will only advance when the user enters valid input. See figure 7. When asked for the next function to process, only of the seven options can be selected. As the user equips gear, the collection size decreases. The user may only enter a number from one to the collection size.

**Exiting the Program**

When the user is ready to exit the program, they can type Quit.

**Conclusion**

Although this program does not allow the user to enter into combat with their character, this software is designed to enhance the play style of a user in a variety of game types. There are many games that employ the use of gear types to customize the look and effectiveness of a character in combat.