Effort Estimation

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| --- | --- | --- | --- | --- | --- | --- |
| **Type of Software** | **Old Easy** | **Old Medium** | **Old Hard** | **New Easy** | **New Medium** | **New Hard** |
| **Control** | $22 | $25 | $27 | $28 | $32 | $36 |
| **Input / Output** | $20 | $23 | $25 | $27 | $29 | $31 |
| **Algorithm** | $15 | $18 | $22 | $20 | $22 | $24 |
| **Data Management** | $18 | $20 | $21 | $24 | $27 | $30 |
| **Time-Critical** | $60 | $60 | $60 | $60 | $60 | $60 |

**Modules:**

* **Character** – 300 Lines of Code. New, Medium, Control, Input/Output.
* **Sound** – 50 Lines of Code. New, Easy, Control.
* **Enemy** – 50 Lines of Code. New, Easy, Control, Algorithm.
* **Power** **Ups** – 200 Lines of Code. New, Hard, Algorithm.
* **Implementation** – 400 Lines of Code. New, Medium, Data Management, Input/Output.

**Math:**

* If a module used two types of software, the average of them was used for the line of code price.
* **Character =** 300 \* (32 + 29) / 2 = $9,150
* **Sound =** 50 \* 28 = $1,400
* **Enemy =** 50 \* (28 + 20) / 2 = $1,200
* **Power Up =** 200 \* 24 = $4,800
* **Implementation =** 400 \* (27 + 29) / 2 = $11,200

**Expert Estimation:**

* (x) pessimistic = $45,000.
  + Estimated by the team.
* (y) most likely = $27,750
  + Added from the math above.
  + $9,150 + $1,400 + $1,200 + $4,800 + $11,200 = $27,750
* (z) optimistic = $16,000.
  + Estimated by the team.

= (x + 4y + z) / 6

= ($45,000 + (4 \* $27,750) + $16,000) / 6 = $29,000

**Reason for expert estimation:**

We picked expert judgement because it is straight forward and uses a recognizable method of a bell curve. This one is easy to interpret and will be easier to come out with an estimation in the beginning of the project.

$29,000