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| **A01** | **Create a New Hero (Peasant)** |
| **Goal** | Create a new Hero and save it. All new Heroes are young adult Peasant Klass of a Race selected by the actor. After displaying the resulting Hero, the actor Saves the Hero in the dormitory (Hero Registry), or Cancels. |
| **Actor** | Player |
| **UXs** | [UX00\_PortalOpeningView.docx](../../Adv_UserExperience/UX00_PortalOpeningView.docx)  [UX01\_NewHeroInputPanel.docx](../../Adv_UserExperience/UX01_NewHeroInputPanel.docx)  [UX02\_HeroDisplay.docx](../../Adv_UserExperience/UX02_HeroDisplay.docx) |
| **Pre-Conditions** | UX00 Portal View is open |
| **Post-Conditions** | Peasant is created and attributes, inventory, and skills are displayed. |
| **Invariants** | * Registries for Heroes, Race, Occupations, associated Skills, and Inventory Items are available. * List of hair color options are available. * Dormitory exists for saving the new Hero and ensuring uniqueness. |

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| **Detailed Description** | | |
|  | **Actor Actions** | **System Response** |
| **1** | Requests to create a new Hero. (Click on Registrar in UX00). | Retrieves the default data and displays UX01. New Hero Input Dialog of user options: name of Hero, gender, Race, trait limits for young adult by race/gender, hair colors, and occupations. See Note 1.  Six trait selectors range from a min to a max, generally from 8 to 18, depending on the Race selected. (Human is the default race). Each selector represents one of six traits of Strength (STR), Dexterity (DEX), Intelligence (INT), Wisdom (WIS), Constitution (CON), and Charisma (CHR). A point tally reservoir contains a total of 24 points from which the actor may distribute more trait points to his or her Hero. See UX01. Hero Input Dialog and Note 2. |
| **2a** | Enters the new Hero’s desired name (required). | Validates the Hero’s name, which must be unique in the Dormitory; details are in Input section. If name is invalid, returns an error prompting the actor to revise the Hero. See Note 3 about interactions before the SUBMIT button is pressed. |
| **2b** | Either (a) enters a new name for the Hero; (b) chooses to overwrite the Hero; or (c) cancels the Save. | (a) RENAME: Validates the Hero’s name, and if valid, saves the Hero under that name, and closes the prompt widget; else displays an invalid name error message.  (b) OVERWRITE: Hero in dormitory is overwritten (deleted), the current Hero is saved in the Dormitory, and closes the prompt widget.  (c) Cancel option closes the prompt widget.  In all cases, the System closes the prompt widget and displays the post-Save version of the Hero attributes display widget. See Notes. |
| **3a** | Optionally, changes gender to Female. | Revises the trait min/max limits immediately for the female of the race. Again, see Note 3 and Table 1b. |
| **3b** | Optional, changes Race to non-Human. | Revises the trait min/max limits immediately for the selected Race. See Note 4 for which traits are adjusted for which Race, and Tables 1a and 1b. |
| **3c** | Optionally, changes hair color. | Any color in the pre-defined dropdown list is valid, so does nothing until Submit is entered. |
| **3d** | Optionally, changes occupation. | Any occupation in the pre-defined dropdown list is valid, so does nothing until Submit is entered. |
| **3e** | Adjusts the 6 trait selectors until all 24 points are allocated to the traits. | No trait is permitted to go below the minimum or maximum for the selected Race/gender. All reservoir points must be allocated before Submitting the Hero. Again, see Note 2.  If, after some traits are distributed, gender or Race changes cause the allocated traits to move outside a valid range, an error indicator is sent to cause the actor to redistribute the points validly. |
| **4** | SUBMITs the input data to create the new Hero. | If valid, creates the Peasant Hero from the given data, with the min/max trait limit rule taking precedence (Note 2).   1. Name, gender, Race, and race limits were validated as the actor entered that data. No action needed here. 2. Any hair color and occupation choice is valid. (Occupational skill is added later.) |
|  |  | 1. Generate the Hero’s weight, which depends on Race and gender. The weight is a randomly calculated value normally distributed within one-half standard deviation (±16%) about a Race-gender mean. See Table 2. 2. Generate the Hero’s height, which depends on Race and gender. The height is a randomly calculated value normally distributed within one-half standard deviation (±16%) about a Race-gender mean. See Table 2. 3. Infer the Hero’s physical description based on CHR, race, height, weight, and hair color. See Note 6. |
|  |  | 1. Calculate the STR modifiers: *To-Hit Melee Mod, Damage Mod*, and *Weight Allowance* using the split range algorithm. See Notes 7 and 8. 2. Calculate the INT modifiers.    1. Set the languages the Hero knows. All Heroes know *Common* and their Race language. See Table 3.    2. Set the number of additional Languages the Hero can learn, based on INT. See Note 9.    3. Set the Literacy value: Reading (11 <= INT <= 12), Reading & Writing (INT > 12), Neither (INT < 11). 3. Set the WIS modifier: *Magic* Attack *Mod*, the bonus/penalty for magical attack resistance, using the split-range algorithm around [8,14]. Also, this Mod is affected by the Hero’s Race and CON. See Note 10. 4. Set the CON modifiers: *Hit Point (HP) Mod*, the bonus/penalty to HP when a Hero is promoted, using the split-range algorithm on [8,14]. 5. Set the DEX modifiers: *To-Hit Missile Mod,* and *Armor Class (AC) Mod*; include Racial adjustments. See Notes 11 and 12. |
|  |  | 1. Calculate the Hero’s *Satiety Points (SP)* and *Hunger*. Number of SP = 15 per pound of weight. Hunger is always initialized to FULL (100% SP). 2. Set the Hero’s Level to 1 and his/her Experience Points (XP) to 0. 3. Set the Hero’s HP = 10 + HP Mod (CON modifier). 4. Set Hero’s gold banked to 0.0 gp, and his/her gold in hand to the default values [15 gold pieces; 8 silver pieces). |
| 1. Set the starting inventory for the Hero. If the Hero’s Occupation requires a Kit, then the Kit is added to the Inventory. Add the total weight to the Hero’s “weight carried” value (load). See Tables 4 and 5. 2. Calculate the Hero’s *Action Points* (AP): AP = STR + DEX 3. Set Armor Class (AC) = 10 + AC Mod (DEX modifier). 4. Set Base Movement (BM) from AP and Table 6. If Hero’s height is unusually short (< 48 inches) or tall (> 78 inches), subtract or add 1 to speed respectively. Calculate encumbrance too, but it should be 0 at this time. |
|  |  | 1. Calculate the Hero’s non-lethal fighting skills, which depends on AP, Speed, and Hero’s weight: Overbearing, Pummeling, Grappling, and Shield Bash. Each of these depends on AP and the total weight of the Hero.    * Initial Overbearing = AP + BM + (1 per 25 lb. of Hero’s weight);    * initial Pummeling = AP+ Damage Mod (STR mod) + To-Hit Mod (DEX mod);    * initial Grappling = AP + Damage Mod (STR mod);    * Initial Shield Bash = 0 (Hero has no Shield yet).   (Q. How will the user know any of these values so s/he can make educated guesses about the best ways to do combat? A real 18-year-old has a reasonably good idea of his or her own physical strengths.)   1. Add Occupation Skill. Each occupation in the Occupation Registry is associated with a Skill from the Skill Registry, except for the Occupation of “None”. 2. Add Racial skills if the Hero is not Human, and any Skill from the Hero’s Occupation. See Tables 7 and 8.   After all initialization is complete, System displays *some* of the Character attributes for the Hero. Most internal traits are not shown, only the ones visible to an observer (e.g. height) or those needed to play the game (e.g. HP or weight carried). See the Outputs section of this use case, and UX02. Hero Display |
|  |  | 1. Calculate the Hero’s non-lethal fighting skills, which depends on AP, Speed, and Hero’s weight: Overbearing, Pummeling, Grappling, and Shield Bash. Each of these depends on AP and the total weight of the Hero.    * Initial Overbearing = AP + BM + (1 per 25 lb. of Hero’s weight);    * initial Pummeling = AP+ Damage Mod (STR mod) + To-Hit Mod (DEX mod);    * initial Grappling = AP + Damage Mod (STR mod);    * Initial Shield Bash = 0 (Hero has no Shield yet). 2. Add Occupation Skill. Each occupation in the Occupation Registry is associated with a Skill from the Skill Registry, except for the Occupation of “None”. 3. Add Racial skills if the Hero is not Human, and any Skill from the Hero’s Occupation. See Tables 7 and 8.   Replaces the HeroInputDialog with the HeroOutputDialog and displays *some* of the Character attributes for the Hero. Most internal traits are not shown, only the ones visible to an observer (e.g. height) or those needed to play the game (e.g. HP or weight carried). See the Outputs section of this use case, and UX02. Hero Display |
| **5a** | Selects SAVE on HeroOutputDialog screen. | Stores the new Hero into the Dormitory, and closes the HeroOutputDialog. The Hero has already been validated for uniqueness. |
| **5b** | Optionally, selects CANCEL | Hero is deleted, HeroOutputDialog is closed, and nothing is saved. |

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| **Inputs:** | Peasant NAME (unique; max limit = 30 characters, embedded white space permitted), GENDER [male], OCCUPATION [None] HAIR\_COLOR [bald], RACE [Human], 24 points distributed to Hero traits |
| **Outputs:** | Hero Nameplate: NAME, GENDER, RACE, KLASS (Peasant), OCCUPATION;  XP (0), LEVEL (0), HP (10), OCCUPATION (selected), HUNGER STATE (FULL);  AC (10), SPEED (N.N), AGE (yrs), HEIGHT (ft, in), WEIGHT (lb);  GP (15), SP (8), GOLD\_BANKED (0.0), WEIGHT\_CARRIED (calculated from inventory);  MAX\_LANGS Knowable, LANGUAGES KNOWN (Common at least);  PHYSICAL DESCRIPTION (inferred from physical traits and Charisma; see Note 7);  INVENTORY List:= Category, Quantity, Item’s Name, Item’s Weight, [Occupation Kit];  SKILLS:= Literacy, Occupational Skill, [Racial Skills] |
| **Notes:** | 1. *Quest Master* creates the default list options for hair color, occupation, occupational skills, and default inventory, all stored in the Defaults Registry. The current race options and associated racial skills are: Human, Dwarf, Elf, Gnome, Half-Elf, Half-Orc, and Hobbit. Quest Master can create new Races in the authoring tool for future releases. 2. The actor cannot set a trait below the min or max for the selected Race and gender, but the system can. System adjustments do not affect the reservoir pool. All reservoir points must be allocated before the Hero can be SUBMITTED. 3. The Hero is created after the SUBMIT button is hit, but validations and feedback can be given to the actor using LosesFocus Listeners: when the field (or other widget) loses focus, the system can validate or update the dialog. These pre-Submit feedbacks are to give the player a feeling of more control over creating their Hero. 4. Tables 1a and 1b show the min and max for young adult male and female for a particular race. 5. New Heroes start at 85% of the maximum age (in years) for Young Adults. These max ages are Human [20], Dwarf [50], Elf [100], Gnome [90], Half-Elf [40], Half-Orc [15], and Hobbit [33]. Therefore a Human Young Adult starts at age 17.0, and Half-Orc starts at age 12.75 years old. 6. Hero’s height and weight are used to find a body type then CHR is used to determine if the description should be positive or negative (e.g. skinny or lithe; squat or stocky). Description also includes a note about racial appearance (e.g. pointed ears for elf; snout-like face for Half-Orc.) 7. *Split Range algorithm* is a common way of assigning mods. For a given range [a,b], the mod is -1 for each point below *a*, and +1 for each point above *b*. 8. STR modifiers *To Hit, Damage,* and *Weight Allowance*.  * *To Hit Mod* is bonus/penalty to get past opponent’s defense and cause damage; *Damage Mod* is bonus/penalty to apply abnormal damage when a hit is made. Both use the split-range algorithm around [8,16]. Example: For STR = 7, To-Hit Mod = -1, Damage Mod = -1. For STR = 17, To-Hit Mod = +1, Damage Mod = +1. * *Weight Allowance* is the difference in weight a Hero can carry without encumbrance, that is without affecting their Block Movement (BM) rate. Weight Allowance is found from the split-range [8,11], except each point outside the range is 25 lb., and applied to the Hero’s weight. It is assumed that a Hero of average STR can lift their own weight without being encumbered. If STR <= 3, Hero is unconscious. Example: For A Hero weighing 100 lb., STR = 7, Weight Allowance = -25 lb., so Hero can carry 75 lb. before losing a Block Movement (BM). For STR = 17, Weight Allowance = +150 lb., Hero can carry 250 lb. before losing a BM.  1. Max Languages learnable by Hero = INT/2 – 4, rounding down; e.g. INT = 14 implies Hero can learn 3 new languages in addition to Common and a possible Race language. Hero cannot learn new languages if INT <= 9. 2. Dwarves, Gnomes, and Hobbits get an additional +1 Magic Attack Mod (for each 4 points of CON they have. Ex: Hero has WIS = 17, CON=15, so Mod = +3. If Hero is also a Gnome, Mod = CON/4 = 3, so Hero gets an additional +3 for a total of +6. This number is applied to a Saving Throw. 3. *To Hit Missile Mod* uses split-range on [8,14] to calculate the bonus/penalty for using missing weapons with high/low DEX. (Elves get an additional +1 Mod whenever they use a bow, but not a crossbow). 4. *Armor Class Mod* is the equivalent defense bonus/penalty due to high/low DEX, calculated by the split-range on [8,14]. The value is applied to the Hero’s Armor Class (AC). 5. There is never a need for the Player to edit their Character, so Edit Hero does not exist as a Use Case. *Adventurer* updates the Hero as the Player performs actions, e.g., buying inventory items, or gaining HP. 6. Each Hero is a Person object characterized by personal attributes, Race, Klass, and Inventory component, and is associated with other supporting objects, e.g., Age and Hunger objects. Each of these components initializes their own aspects of the Hero. |

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| **Reviewers’ Comments** |  |

**Table 1a: Original Range Limits for Male Races**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| TRAIT | Human | Dwarf | Elf | Gnome | Half-Elf | Half-Orc | Hobbit |
| STR | 8 – 18 | 8 – 18 | 8 – 18 | 7 – 17 | 8 – 18 | 9 – 19 | 7 – 17 |
| INT | 8 -- 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 |
| WIS | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 |
| DEX | 8 – 18 | 8 – 18 | 9 – 19 | 8 – 18 | 8 – 18 | 8 – 18 | 9 – 19 |
| CON | 8 – 18 | 9 – 19 | 7 – 17 | 9 – 19 | 8 – 18 | 9 – 19 | 8 – 18 |
| CHR | 8 – 18 | 7 – 17 | 8 – 18 | 8 – 18 | 8 – 18 | 6 – 16 | 8 – 18 |

**Table 1b: Range Limits for Female\* Races**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| TRAIT | Human | Dwarf | Elf | Gnome | Half-Elf | Half-Orc | Hobbit |
| STR | 7 – 17 | 7 – 17 | 7 – 17 | 6 – 16 | 7 – 17 | 8 – 18 | 6 – 16 |
| INT | 8 -- 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 |
| WIS | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 | 8 – 18 |
| DEX | 8 – 18 | 8 – 18 | 9 – 19 | 8 – 18 | 8 – 18 | 8 – 18 | 9 – 19 |
| CON | 8 – 18 | 9 – 19 | 7 – 17 | 9 – 19 | 8 – 18 | 9 – 19 | 8 – 18 |
| CHR | 9 – 19 | 8 – 18 | 9 – 19 | 9 – 19 | 9 – 19 | 7– 17 | 9 – 19 |

\*Female adjustments are STR-1 and CHR+1 (although no Race can exceed 19); and are included in the table.

Personal Trait adjustments for Young Adults are not applied to the range, but to the traits of the new Hero. Young Adult adjustment is CON+1, WIS-1 (not included in the table).

**Table 2: Mean Weight Tables for Races**

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| --- | --- | --- | --- | --- |
| **RACE** | **Median Height (in.)** | | **Median Weight (lb.)** | |
| **Male** | **Female** | **Male** | **Female** |

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| --- | --- | --- | --- | --- |
| Half-Orc | 72 | 68 | 180 | 150 |
| Human | 70 | 66 | 175 | 130 |
| Half-Elf | 66 | 62 | 150 | 110 |
| Elf | 60 | 56 | 125 | 100 |
| Hobbit | 52 | 48 | 100 | 75 |
| Dwarf | 48 | 46 | 125 | 120 |
| Gnome | 42 | 38 | 75 | 60 |

**Table 3. Race Languages in Addition To Common**

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| --- | --- |
| Dwarf | Groken |
| Elf | Elvish |
| Gnome | Gnomon |
| Half-Elf | 50% chance of Elvish |
| Half-Orc | 50% chance of Orcish |
| Hobbit | Tolkeen |

**Table 4. Starting Equipment for Peasant**

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| --- | --- | --- | --- | --- | --- |
| **ITEM** | **Weight (lb. oz.)** | | **ITEM** | **Weight (lb. oz.)** | |
| Backpack | 10 | 0 | Shirt, heavy cloth | 0 | 8 |
| Cloak | 2 | 0 | Tinderbox, flint & steel | 0 | 5 |
| Belt | 0 | 5 | Torches (3) (0.5 lb. each) | 1 | 8 |
| Belt Pouch, small | 0 | 2 | Rations,1 day (3) (0.125 lb. each) | 0 | 5 |
| Breeches | 1 | 0 | Skein, full with 1 quart of water | 1 | 0 |
| Boots, pair | 2 | 8 | Quarterstaff | 3 | 0 |

**TOTAL WEIGHT = 22.75 lb.**

Occupational Kit is included for certain occupations. Occupation and weight of kit shown below. Weight above does not include Kit’s weight.

**Table 5. Occupational Kits for Certain Occupations**

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| **OCCUPATION** | **KIT** | **Weight (lb.)** |
| Alchemist | Alchemist: contains bottles, powders, glassware for substance identification | 5.0 |
| Apothecary | Alchemist: contains bottles, powders, glassware for substance identification | 5.0 |
| Armorer | Metalsmith: contains iron-working tools and scrap metal | 10.0 |
| Bowyer | Woodworking: contains wood-working tools and scrap wood | 7.0 |
| Carpenter | Woodworking: contains wood-working tools and scrap wood | 7.0 |
| Fisher | Sewing: contains needles, thread, net-making supplies | 3.0 |
| Freighter | Heavy Woodworking: contains large wood-working tools | 12.0 |
| Gambler | Owns Dice: an honest pair and a crooked pair that always yields 12 | 0.25 |
| Jeweler | Owns gem loop for appraising gems | 0.125 |
| Leatherworker | Heavy Sewing: contain large needles, threads, tanning supplies | 2.0 |
| Navigator (ship) | Owns compass for telling direction | 4oz |
| Tailor | Sewing: contains needles, thread, clothing-making supplies | 3.0 |
| Weaponsmith | Metalsmith: contains iron-working tools and scrap metal | 10.0 |
| Woodworker | Woodworking: contains wood-working tools and scrap wood | 7.0 |

**Table 6. Block Movement by Action Points**

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| **Action Points (AP)** | **Base Movement (BM)** |
| 1 <= AP <= 15 | 2 |
| 16 <= AP <= 23 | 3 |
| 24 <= AP <= 32 | 4 |
| 33 <= AP <= 40 | 5 |

**Table 7. Skills and Definitions by Occupation**

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| **OCCUPATION** | **SKILL: Action** |
| Acrobat | Tumbling: Reduce damage d3 when falling off walls |
| Alchemist | Arcane Knowledge: +1 INT to recognize unfamiliar items |
| Apothecary | Natural Knowledge: +1 WIS to recognize unfamiliar items |
| Armorer | Repair Armor: Repair armor at -1 AC; makes small wooden or metal shields (breaks after critical hit) |
| Banker | Brokering: Gets no-fee banking and 10% discount on financial transactions |
| Bowyer | Bow making: Repairs bows and crossbows; makes -1 arrows |
| Carpenter | Find wooden secrets: Find secret doors, drawers in wood panels, cabinets, at 20%; stacks with Rogue skills |
| Courtesan | Negotiate: +2 CHR for any deal |
| Farmer | Predict weather: for next 24 hour period |
| Fisher | Net making: for fish, monsters, or NPCs, if enough rope |
| Forester | Inuit Direction: +1 WIS to know outside compass directions |
| Freighter | Negotiations: +1 CHR to negotiate money deals |
| Gambler | Luck: +1 Save on all risk-taking; +2 Save on all gambling games |
| Hunter | Hunting: Increased chance +20% of finding and catching wild game |
| Innkeeper | Sense motives: +1 WIS to determine if person is lying or bluffing |
| Jeweler | Appraise: Can identify base value of jewelry, gems |
| Leather worker | Leather working: Make/repair leather armor at AC-1; can make gloves, boots |
| Mason | Find stone secrets: Find secret openings in stone work at +10%; stacks with Rogue skill |
| Miner | Intuit underground direction: +1 WIS to know direction underground |
| Sailor | Fast swim: Swims over or underwater at half BM (Normal speed = 1 BM) |
| Shipwright | Make sailing raft: if has hand axe, wood, and cloth |
| Tailor | Sewing: Makes clothing, belt, boots, cloak, hat |
| Trader | Brokering: Gets +10% discount on financial transactions; no fee banking |
| Trapper | Trapping: Set, find, remove simple mechanical traps as if L1 Rogue |
| Weaponsmith | Make weapons: Make/repair small common weapons at -1 ToHit and -1 Damage |
| Weaver | Appraise tapestries: at base value |
| Woodworker | Woodworking: Repair crossbows, add secret compartment to chest or cabinet. |
|  | **RACIAL SKILL DEFINITIONS** |
| Archery | Get +1 to Hit when using a short or long bow (not crossbow) |
| Geasing N% | N% chance to DETECT the following when actively trying: slopes in underground passages; direction of underground travel; sliding or shifting walls or rooms, stonework traps, approximate depth underground |
| Infravision N’ | Able to see warm bodies in darkness (vague description) N feet away |
| Resistance to Sleep spell (N%) | Gets N% Save roll instead of normal Save roll for this spell. |
| Resistance to Charm spell (N%) | Gets N% Save roll instead of normal Save roll for this spell. |
| Tingling (N%) | Able to DETECT secret or concealed doors if within 10 feet: N% if actively trying, else N/2 % if merely walking by. |

**Table 8. Racial Skills**

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| **Race** | **Skill** |
| Human | None |
| Dwarf | Infravision 60’; Geasing (66%) |
| Elf | Infravision 60’; Resistance to Sleep and Charm spells (90%); Archery; Tingling (66%) |
| Gnome | Infravision 60’; Geasing (50%) |
| Half-Elf | Infravision 30’; Resistance to Sleep and Charm spells (30%); Tingling (33%) |
| Half-Orc | Infravision 60’ |
| Hobbit | Infravision 30’; Resistance to Poison; Geasing (33%) |